

**REGIONAL FACTORS
IN NATIONAL PLANNING**

DECEMBER - 1935

NATIONAL RESOURCES COMMITTEE

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REGIONAL FACTORS IN NATIONAL PLANNING AND DEVELOPMENT

NATIONAL
RESOURCES COMMITTEE

DECEMBER 1935

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NATIONAL RESOURCES COMMITTEE
INTERIOR BUILDING
WASHINGTON

December 2, 1935.

THE PRESIDENT,
The White House.

MY DEAR MR. PRESIDENT:

We have the honor to transmit herewith a report on "Regional Factors in National Planning and Development" which has been prepared in accordance with your request.

This report deals with important problems of planning and development which overlap State lines or which require the use of combined Federal and State powers.

The members of the Committee have not all had an opportunity to give full consideration to all of the points involved. However, they endorse the recommendations and desire to indicate to you their belief in the great importance and value of this study.

Sincerely yours,

HAROLD L. ICKES,
Secretary of the Interior, Chairman.

GEORGE H. DEHN,*
Secretary of War.

HENRY A. WALLACE,
Secretary of Agriculture.

DANIEL C. ROPER,
Secretary of Commerce.

FRANCES PERKINS,
Secretary of Labor.

HARRY L. HOPKINS,
Federal Emergency Relief Administrator.

FREDERIC A. DELANO.

CHARLES E. MERRIAM.

WESLEY C. MITCHELL.

* The Secretary of War had not returned from the Philippines when the report was being considered.

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This committee was assisted by a research staff consisting of Helen M. Strong, James W. Fesler, William J. Haggerty, Paul A. Fischer, John McDiarmid, and Felix Nigro.

FOREWORD

1. The Problem

The consideration of what are called regional problems is thrust upon the attention of our Nation by a number of urgent situations. Among these are:

1. The increasingly clear realization of the inadequacy of single States to carry out all planning programs necessary for conserving our national resources, both natural and human, as illustrated by the widespread efforts to negotiate interstate compacts dealing with watersheds, oil conservation, labor standards, and crime prevention. (Thirty State compacts have been approved by Congress since 1918.)

2. The development of an extensive interstate cooperation movement. In earlier days this was expressed by the Commissioners of Uniform State Laws (1894), and by the Conference of Governors (1906). In more recent times there have appeared the Council of State Governments, the Interstate Assembly, various commissions and committees on interstate cooperation, and regional secretariats of States.

3. The rise of interstate metropolitan planning, as in New York, Chicago, Philadelphia, Washington, St. Louis, and elsewhere.

4. The emergence and activity of two group-of-States planning regions—the Pacific Northwest Regional Commission and the New England Regional Planning Commission.

5. The establishment of more than 100 types of Federal regional areas dealing with field administration and departmental planning.

6. The creation of the Tennessee Valley Authority and the proposals for the establishment of other like authorities.

7. The pressure of economic distress and unbalance in various agricultural-industrial areas of the United States, and the corresponding necessity of establishing subnational administration in the regions served by the several economic groups; e. g., as in the case of the Agricultural Adjustment Administration.

2. Method of Study

In order to explore these problems and provide a factual basis for recommendations by the National Resources Committee a special research staff was set up under the general direction of a technical subcommittee on regional planning. This subcommittee consisted of Dr. John M. Gaus, of the University of Wisconsin (chairman); Dr. Marshall E. Dimock, of the University of Chicago; Mr. Jacob L. Crane, planning consultant to the States of Wisconsin and Michigan; and Dr. George T. Renner, of the National Resources Committee staff. The first two members are authorities in the field of Public Administration—Professor Gaus having served as secretary to the Wisconsin Executive Council and the Wisconsin Committee on Land Use, and Professor Dimock having recently completed two studies for the Department of War on Federal corporations. Mr. Crane is president of the American City Planning Institute. Dr. Renner, formerly professor of geography at the University of Washington

and Columbia University, is a specialist in the field of economic geography.

The research committee and its staff has made a series of special studies, as follows:

1. A study of interstate compacts and interstate cooperation, including an analysis of the use of the interstate compact since the adoption of the Federal Constitution and of the limitations and possibilities inherent in this method of cooperation. (See pp. 25 to 28 and 34 to 52 for full report.)

2. A study of interstate metropolitan planning, illustrating the growth of the city-planning idea into areas involving more than one State. Examples of this are metropolitan New York, Chicago, Philadelphia, Washington, St. Louis, etc., where urban problems have spread beyond or across State lines (pp. 14 to 17).

3. A study of the Colorado River Basin as an example of the Interstate Compact device supplemented

by Federal action. The Boulder Dam project and the negotiations leading to its construction were reviewed for evidence of the adaptability of this method of procedure to other interstate problems (pp. 53 to 70).

4. A study of the New England region and of the organization of the New England Regional Planning Commission, which has supplemented in turn the planning efforts of the New England Council and the conference of New England Governors (pp. 117 to 135).

5. A study of the Pacific Northwest Regional Planning Commission which has been supplemented by a recent special investigation of the Columbia Basin made by that Commission. The immediate and pressing problems concerning marketing of Bonneville and Grand Coulee power, and the successful organization of the Planning Commission for the Pacific Northwest have made this study particularly timely and significant (pp. 117 to 135).

6. A study of the Tennessee Valley Developments and Authority as an example of the Federal cooperation method of procedure in attacking interstate problems. With the cooperation of the members of the Tennessee Valley Authority, both the technical research committee and the advisory committee have

been able to make a detailed review of the successes and difficulties encountered by the Tennessee Valley Authority (pp. 83 to 116).

7. A study of Federal administrative and planning regions and the methods used by Federal bureaus for decentralization of their activities. The study disclosed that over 100 different methods of division of the United States are used by Federal agencies, with broadly scattered offices throughout the land (pp. 29 to 31 and 71 to 82. See also Appendix).

8. Finally, the research committee has made a notable pioneer study of the nature and significance of regionalism in the United States as it affects national development policies, and has endeavored to analyze various types of homogenous and heterogeneous regional units based on such varied factors as influence of metropolitan centers administrative convenience, combinations of States, a single factor or function, or composite or selected factors and functions, and to determine their administrative usefulness for planning, development, and operation (pp. 138 to 179).

Out of these studies and through numerous meetings, the research committee has drawn from the material certain conclusions and statements of principles.

FINDINGS AND PRINCIPLES

The following statement of principles covering regional organization is important as a preliminary to specific recommendations:

Government in the United States is frequently presented as a conflict between the National Government and the States, an encroachment of one upon the other. Looking at the everyday activities of all levels of government in any given area, however, there are many functions for which coordinated action is required in the solution of public problems. Such coordinated action would permit a flexible program that could be adjusted to the varying needs of the different parts of the country. The National and State Governments should supplement, rather than supplant, each other.

A problem that is fundamentally more serious, however, but often overlooked in the hot debate over "centralization" versus "State rights", is the fact that the major problem areas frequently overlap State boundaries and yet cover only a part of the whole Nation. Production areas, manufacturing areas, lines of transportation, corn, cotton, citrus, coal, watersheds, timber, are no respecters of political boundaries, yet may create problems that require public attention. Some of these areas, such as the Northeast, the Northwest, the Southeast, are marked by so many fundamental natural, population, and cultural factors, that they create a regional consciousness in the minds of their inhabitants. The fact that State boundaries are firmly embedded in the Constitution has led to a search for means of setting these regional or subnational interests into the framework of the American Nation.

The pressure of these problems upon our several levels of government is seen in various experiments in this country. Metropolitan centers have established planning agencies embracing parts of several States, as in New York, Chicago, and Washington. States have joined through informal agreements or compacts in creating interstate agencies, as in the famous Boulder Dam agreement and many others. Interstate or regional planning commissions have been organized in the Pacific Northwest and in New England. The Tennessee Valley experiment is under way. The National Government has organized most of its departments on the basis of local districts, and has established agencies to deal with particular areas.

The very multiplicity and complexity of these efforts is apt to cause resentment at the amount of governmental machinery. But a Federal system is necessarily

complex. That is the price to be paid for its advantages. Nevertheless, this complexity makes all the more important a careful search for the principles to be followed in shaping programs of national development, and especially by such national agencies as are responsible for formulating planning policies.

These principles, drawn from the detailed inquiries of our technical subcommittee, may be stated as follows:

(a) There should be a comprehensive view of the policies of all governments in any given area required for the solution of the problems there being attacked.

(b) There is a special responsibility on the Federal Government to set its own house in order by insuring the careful coordination of its own agencies dealing with any problem of concern to several governments in any area, so that the Federal powers can more effectively mesh in with those of the other governments in the area.

(c) Under our Federal system there must be a sharing of powers between the national, interstate, and State authorities, and consequently a need for a careful exploration and scheduling of programs in advance by all, in what is necessarily a cooperative venture.

(d) There is, therefore, a need for decentralizing one stage in the planning of national development to a subnational point at which a total review of the problems of any given area by all the agencies of government concerned will be encouraged so that the work of all will be more effective.

(e) The selection of the area and its planning center should be made with reference to the general coincidence of major planning problems, such as land use, water use, and public works, with the regional sentiment in a given area. Since these problems differ in the extent of the area which they affect, the boundaries of the area should be flexible rather than fixed, and the States with which cooperation must be sought will vary somewhat with the particular problem under discussion. The aim is always to interrelate the various Federal agencies with State and other governments concerned with the planning problems of the given area, so that a comprehensive view of the operations of them all may be encouraged at the planning center most satisfactory to them all.

It is impossible to predict how changes in such basic factors as population, the utilization of natural resources, transportation, industrial development will

affect common regional problems and consciousness in the future. It is all the more important, therefore, that these changes be reflected as sensitively as may be necessary in the planning of national development, so that national policies will help and not impede the efforts of the States to carry out effective programs within their own regions. Frequently, the States may be acting through interstate agencies also.

In the light of these facts, and in view of the present great variety of districts and centers used by the Federal departments, it would be advantageous to attempt some grouping or redistricting at least among those Federal organizations concerned with common problems of national development, so that they reflect the underlying grouping of problems by regions. A more careful Federal districting for field activities would assist also in the more economical and effective grouping of local governments.

As the various governments which share the power and the responsibility required for dealing with regional problems develop their programs for the region, it will be possible to determine more adequately the best agencies to execute these policies. There is no single type of organization that fits every situation; there are many types which our experience reveals as usable. Among these are the many agencies experienced in administering single functions, such as the Forest, Park, or Health Service; the national public corporation, such as the Tennessee Valley Authority, where several interrelated Federal functions center in the same region; or an interstate authority where State powers are required to deal with a problem extending over more than one State; while for many functions, an advance scheduling of programs in cooperation between the State and national agencies working in the region will obviate the creation of new machinery of government. Where the problem requires a careful dovetailing or putting together of Federal powers into a unified program, a public authority with ownership vested in both Federal and State Governments might provide for joint responsibility and costs.

The selection of the best type of organization should be based upon:

- (a) The functions to be assigned to it.
- (b) The area in which it is to operate.
- (c) The location of the constitutional powers required.
- (d) The incidence of the benefits and costs.

The determination of the best type of Government agency for development programs, therefore, leads back to the substantial advantages to be derived from the advance planning of the policies of government. Especially is this true in a Federal system; its very

complexity requires advance planning. If problems are to be solved, if either the Federal or the State Government is to be effective in a given area, the total action of all agencies must be analyzed and coordinated in advance. The planning of land use is an illustration of the necessity of bringing together the national, State, and county agencies of government. The active response of the States to the encouragement which has been given to State planning by the initiative of the National Resources Committee both illustrates the point and indicates the possibilities of projecting such cooperation into the field of interstate relations reflecting regional problems.

Advance scheduling of plans and the diffusion of the planning spirit in officialdom will make it unnecessary in very many instances to set up new formal agencies. In the final analysis, government is essentially human cooperation, and this cooperation may often be effected without any new machinery whatever; and with great economy to the public.

Terms such as "planning" and "coordination" derive their real and ultimate meaning from the quality of the public personnel to whom these tasks fall. The public official whose outlook is confined to his own office and to his particular unit of government is not likely to see the way in which his own policy should be supplemented by those of other officials. Care in training and selecting is necessary to secure the desired type of personnel, but the encouragement given within the agency to consultation with other related agencies is equally important. Greater emphasis on regional planning for national development would play an important role in stimulating a wider outlook on the part of public personnel through all levels of government. It is in this direction that Federal systems may find a solution for otherwise insoluble problems that arise out of the division of constitutional powers.

In order to avoid misunderstanding of the broader meaning of subnational organization, it should be made clear that the "Regionalism" here discussed is not a Balkanization of the United States, but a better organization of our American national purposes—a more effective promotion of the public welfare. Regionalism is not to be confused with sectionalism. A well-known authority in this field, Prof. Howard W. Odum, of North Carolina, says that "Regionalism envisages the Nation first, making the total national culture the final arbiter, while sectionalism sees the region first and the Nation afterward."¹

¹Dr. Odum comments in full: "There are certain fundamental distinctions between sectionalism such as Frederick Jackson Turner's authentic historical, political, economic sectionalism of the nation and the present developing culture and administrative regionalism of the United States. I note five distinctive features, each of great significance. The first is that regionalism envisages the nation first, making

It has been suggested that regions—perhaps 10 or 12 in number—be organized as new political units, combining and regrouping States, as a basis of congressional representation and as independent authorities. Quite aside from the constitutional questions involved, however, such groupings would not be flexible enough to deal effectively with the rapidly developing and changing regional activities of our governments, such as power, water, minerals, industry, agriculture—and might even obstruct the function they should serve. The proposed grouping and coordination of administrative or other agencies, on the other hand, would be flexible and adaptable, and would make possible all that may wisely be attempted in subnational situations and problems.

The interests of the whole Nation are of prior importance to those of any phase, fraction or section of public or private interest within the general framework of our Constitutional system. Many problems are not primarily regional at all, but involve the balance of social and economic forces, such as industry and agriculture, production and consumption, export and import, income and expenditure. In general, our American national policy appealing to the whole Nation for support is nationally determined, while the administration of national policy may be partly national and partly local. Local policies are best determined locally.

A regional organization, whatever its varied form, should not be considered as a new form of sovereignty, even in embryo. It need never develop to the stage where it will have elected officers, a legislative body, and the power to tax. Consequently the region need not have fixed boundaries. By the same token the region need have no definite body of citizens. Many citizens may consider themselves as belonging to one region for one purpose and to an adjoining region for another. From the point of view of the National Planning Agency, regional planning work should be

focused in a central office to which have been assigned certain problems, largely overlapping because having different areal extents.

If the regional planning commission is to live and thrive, it must be carefully designed. There being no regional sovereignty, there will be no regional executive of which the planning organ can become a part.

Its plans, therefore, are liable to hang in mid-air, unless it is carefully provided with a conduit running to an established executive. The regional commissions ought to have a firm contact with the National Planning Agency. The latter should take pains to nourish the prestige of the commission by handling their plans promptly and presenting them vigorously to the President. The commissions should not have to rely on State governors alone, although, of course, they should be in close touch with the State planning boards in each region.

One advantage of having variable rather than fixed regional boundaries is that each specific problem can be handled by the regional planning office with regard to the actual area affected. When two or more problems interlock—as, for example, flood control, soil erosion, and power—the office can handle the problem of their interrelationship with regard to the area concerned in the interrelationship. The problem areas of contiguous regions may be expected to interlace and overlap, with frequent opportunities for cooperation or joint planning.

Another advantage of having no fixed regional boundaries is in the welding effect of interlocking regions upon the national structure. The rapid and drastic changes occurring in our national life necessarily subject the Nation to heavy internal strains. Some areas are blighted by the shrinking of their customary source of income. Some areas are subjected to heavy debts, while others depend for their prosperity upon the power to collect debts. The conflicting sectional interests interact through the national elections and through the Federal Congress, without serious disorder. If regions with serious problems were to be given geographical boundaries, the tendency to defend their regional interest at the boundary, so characteristic of Europe, might be encouraged in America. On the other hand, a series of interrelated regions, closely cooperating with the Federal establishment, would tend to cement the union and to promote the national solution of intersectional maladjustments. This relationship, important even in ordinary times, becomes vital in periods of rapid change.

the total national culture the final arbiter, while sectionalism sees the region first and the nation afterward. In the second place, sectionalism emphasizes political boundaries and state sovereignty, technical legislation, and local loyalties. Where sectionalism features partisan separateness, regionalism connotes component and constituent parts of the national culture. In the third place, sectionalism may be likened to cultural inbreeding whereas regionalism is line breeding, or regionalism may be considered as cultural specialization within geographical bounds in an age which continuously demands wider contacts and standardized activities; or it may be the way of quality in a quantity world. In the fourth place, sectionalism is analogous to the old individualism while regionalism features cooperative endeavor. And, finally, one of the most critical aspects of sectionalism is that it must ultimately lead to a centralized coercive federalism, which is contrary to the stated ideals of Amerlenn democracy."

RECOMMENDATIONS

To meet problems of regional organizations for planning, construction, and operation of projects and policies involving more than one State, and on the basis of the reports of our technical committee and our analysis of their data, we recommend the following:

1. State Planning

In view of the demonstrated usefulness of State planning boards, both to the localities and to the Nation, we recommend the continuing support of these agencies. In no other way thus far developed is it possible to bring about so ample a measure of cooperative planning of our resources, local, State, and National, at so modest a cost, and with so great a possibility of progressively larger results.

We recommend that the States provide for permanent establishment and adequate financial support for State planning boards where this has not already been done. We further recommend that for a development period and in order to promote interstate and Federal coordination, Federal aid be extended to State boards in the form of technical consultants and emergency personnel, as at present, or by loan of Federal personnel, or by other ways and means that may seem appropriate.

2. Establishment of Regional Planning Commissions

We recommend the establishment, from time to time as needed, of regional planning commissions of the general type of those recently set up in the Pacific Northwest and in New England, as advisory bodies for planning purposes in their respective areas. These regional planning commissions have consisted of representatives of State planning boards and of a Federal district chairman representing the National Planning Board, and have been advisory rather than operating agencies. We further recommend continued assistance and encouragement to such regional planning commissions by the National Planning Agency.

3. Encouragement of Interstate Compacts

We recommend the encouragement of interstate compacts as a means of solving regional problems wherever this procedure is found to be feasible. The Constitu-

tion authorizes such compacts, and the congressional policy hitherto followed, of consenting to interstate compacts, has made possible many useful arrangements between States, and it is probable that many more will be made in the future. (Down to date, the number of interstate compacts authorized by Congress is 57, but of these, 30 have been approved since 1918.) Many difficulties stand in the way of prompt and vigorous action through State compacts, but these may be overcome to some extent by the pressure of emergency and by habituation to the general practice of interstate agreement. The recent establishment of State committees and commissions on interstate cooperation (now 22 in number), and other developments, interstate interest, and machinery will no doubt facilitate such organization and action.

It is suggested, for serious consideration, that in some classes of compacts requiring continuous administration there should be Federal participation. This may take one of several forms—

1. Participation in the personnel of an interstate commission;
2. Participation in the administration of an interstate agreement;
3. Participation in the financing of an interstate agreement.

In such arrangements the initiative might come from either a State or a group of States or from the United States, and the responsibility for financing and administration might be divided between national and local authorities. We further recommend encouragement of reciprocal legislation between two or more States as a means of making possible interstate cooperation and coordination in a number of fields.

4. Use of Federal Corporate Authorities

Federal authorities of a regional-functional nature, of the general type of the Tennessee Valley Authority, should be given serious consideration as a means of dealing with types of subnational problems.

It is clear that there are undoubted advantages (1) in the establishment of the Government-owned corporation as a flexible agency for dealing with special sets of problems, and (2) in the value of a unit of operation smaller than the Nation—properly characterized as subnational. The Tennessee Valley Authority, although established by the United States

RECOMMENDATIONS

Government, has shown facility in adjusting itself to local situations, fitting in (1) by contractual arrangements with local authorities, (2) by administrative and financial arrangements, (3) by coordination of planning agencies, local, State, and National, and (4) by the serious attention to the social and economic possibilities of public works development.

If regional or other like agencies have already done the preparatory planning in a given area, the problems of the authority will be far easier and it would be possible to progress much more rapidly.

Aside from the special problems of the Tennessee Valley Authority, the Government-owned corporation offers many possibilities for dealing with regional problems, avoiding the necessity of setting up a new unit of government, and combining in unique fashion some of the strongest advantages of public and of private business.

In the long run, this type of agency will naturally be compared with other forms of organization such as the regional planning commissions in New England and the Pacific Northwest, the interstate compact with or without Federal participation or direct State or Federal construction and operation. Differing forms of organization will doubtless be found practicable and desirable in different regions to deal with different problems or to attack problems from different points of view.

5. Advance Planning

We recommend the adoption of a general policy that comprehensive planning should precede development programs, particularly when such proposals involve large-scale, multi-purpose projects, with a view to determining and negotiating suitable agreements on division of responsibility and cost of such projects among the interested governmental agencies before construction is started.

6. Continuous National Planning

We recommend the establishment of a permanent advisory National Planning Board responsible directly to the President and charged with the duty of preparing plans and general policies, stimulating and encouraging regional and State planning, and advising the President on progress and development of planned proposals.

7. Permanent National Development Administration

We recommend the establishment of a permanent National Development Administration based upon the powers, duties, and functions of the Emergency Administration of Public Works, the Works Progress Administration, the Allotment Committee, and the Federal Employment Stabilization Office. We reaffirm our recommendations concerning the organization and duties of such an administration and its relations with the proposed National Planning Board as outlined in the report of the National Resources Board on December 1, 1934.

8. Regional Development Methods

We recommend the use of a variety of methods for construction and development of regional projects as adequate planning may suggest or the Development Administration may find appropriate or expedient. Assignment of work to Federal bureaus, organization of a Federal corporate authority (with or without State participation), negotiation of interstate compacts (with or without Federal participation) or loan or grant to State or local agency, or pooling and interchange of personnel may prove adequate.

9. Federal Administrative Regional Centralization

We recommend pointing Federal policy toward regrouping the field districts used by the numerous United States agencies (now involving some 108 different arrangements of districts with as high as 73 agencies in some centers) in the direction of achieving a limited number of regional centers, say 10 to 12. It is, of course, necessary and desirable that there be many types of districts for the many different agencies of the Federal Government ranging over many kinds of public services. But there are distinct advantages in economy of time and effort in directing these organizations more sharply toward some simpler framework. With concentration of their field headquarters the establishment of 10 or 12 somewhat unified regional agencies of the United States Government could be made to coincide with the State regional secretariats now developing, and might serve as centers for regional or subnational planning agencies. A tentative list of such centers has been suggested by our technical committee as indicative of the possibilities in this direction.

REPORT OF THE
TECHNICAL COMMITTEE ON REGIONAL PLANNING
NATIONAL RESOURCES COMMITTEE

OCTOBER 1935

JOHN M. GAUS, *Chairman*
JACOB CRANE MARSHALL E. DIMOCK
GEORGE T. RENNER

REGIONAL FACTORS IN NATIONAL PLANNING AND DEVELOPMENT

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PART I

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AN INTRODUCTORY STATEMENT OF THE PROBLEM

1. Relation of Governmental Policies to Regional Factors

Among the recommendations made by the National Resources Board in its report to the President transmitted on December 1, 1934, was part V, entitled "State and Regional Planning." This reads as follows:

1. That the States be encouraged to establish permanent State planning boards and to develop as promptly as possible adequate State planning programs.

2. That continued cooperation with and encouragement of State planning and local planning work should be one of the primary obligations and activities of the proposed National Planning Board.

3. That assistance and encouragement to interstate and regional planning should constitute an important obligation of the National Planning Board (pp. 5-6).

The present report derives from this recognition by the National Resources Board of the fact that policies of national development are necessarily related to regional factors. This has been true in American experience from colonial times to the present. In executing the powers and duties derived from the Constitution and from the statutes passed by the Congress, the various departments and agencies of the Federal Government, through their responsible officials daily formulate and put into operation working programs. We are here attempting to find out how far in such duties, as they relate to national development, these officials find it necessary to take account of factors peculiar to any limited portion of the total area of the United States—generally involving more than one State—of factors which we are here calling "regional."

Wherever State or Federal Government comes directly into contact with the realm of natural resources, the problem of regionalism tends to emerge. The qualities, resources, and problems of the natural environment occur in particular combinations locally and are distributed unevenly over the earth; and the existing areas of government are rarely coterminous with either the areas of human and natural resources, or with the "problem areas" which demand treatment. As a result of these two facts, no coordinated handling of resources and problem areas can be hoped for unless new and appropriate governmental devices be developed.

Within the States themselves the need for adjusting the areas of governmental administration so as to make them conform more closely either to problem areas or

to functional areas has already been recognized to a certain extent. There has been a tendency to create special governmental areas to deal with certain functions, e. g., drainage districts, conservancy districts, irrigation districts, and school districts, for which existing local units have been found inappropriate. There is a trend toward developing district government for metropolitan areas. Owing to the habit of the population of industrial and commercial centers to overflow original city boundaries the urban problem usually includes not only the central city but suburban towns and cities as well. Consequently, new governmental arrangements, such as the Boston Metropolitan District Commission, have been devised. There is a movement, as yet in its infancy, toward county consolidation. There is a tendency for State government to absorb functions and to exercise powers formerly allocated to local units. This has resulted from the realization that many problems transcend township and county boundaries. These are primarily manifestations of the regional factor emerging within the States themselves. Meanwhile, these four above-mentioned tendencies scarcely touch its larger interstate incidence discussed in part II.

2. Definition of Jurisdiction

The definition of jurisdiction is one of the most important, if not the preeminent problem of governmental administration. Jurisdiction can be defined in two ways: First, in terms of the allocation or reallocation of functions among the several levels of government, and among the different bureaus and departments upon any given level; and second, in terms of allocation or reallocation of area or territory. These would seem to be equally important, for one is the reverse side of the problem whilst the other is the obverse. American students tend to confine their examination of administrative jurisdiction to questions bearing on allocation of functions, and have usually been discouraged by the difficulties of changing political boundaries which have been "frozen" by being written into constitutions and laws.

No administrative arrangements can be set up to deal with resources or problem areas and no large-scale improvements and constructions can be carried out as part of an integrated program, without there being certain geographical implications attaching to them.

Areas for planning, development, and operation may well be carefully defined in advance of the carrying-out of such activities, in accordance with certain predetermined principles. Certain it is that "the groupings of regional qualities discernible and their presentation on a map [help] a given social group to understand its position, its limitations, and its possibilities. It also helps the Government to function intelligently, for government generally has to deal with regions in the concrete. Legislation cannot be designed for each square mile of land. Units of larger size or of natural associations of conditions or processes have to be taken. What are the borders of such units to be?"¹

3. Integration of Activities at Different Levels of Government

a. Political Areas

It may be useful to cite more precisely by way of illustration how the Federal policy is interconnected with policies of other governmental units. Due to the division of powers under the Constitution of the United States, a forest policy requires both Federal and State action in order to be complete. While the Federal Government may itself own extensive forest lands and park areas and while it may encourage and conduct extensive research in forestry and wood uses, both legal and financial considerations, to say nothing of local policies, make it necessary for the Federal program to be supplemented by State action in establishing public forests, encouraging forest management on private lands through taxation and other means, and in protection of land-use policies by zoning powers.

Even within the State and subject to the general authorization by the State, however, there are still other political units that share in some degree in the realization of policies of national development. Thus in those States in which counties have been given the power to zone lands in order to maintain standards of wise land use, the program of the county and even township authorities may have a most important part in the fulfillment of a national forest plan. A description of the procedure in developing a zoning ordinance for a Wisconsin county recently made by a student of the administration of the zoning powers in the State shows the relationship:²

Various agencies, in the time between the adoption of the resolution and the passage of the zoning ordinance, prepare a more or less thorough survey of the county to be zoned. The resolution passed by the Marinette County board indicates the scope of this survey: "An economic survey for Marinette

County, which will tabulate by townships their trend of agricultural development, local tax expenditures, assessed valuations, roads, and school facilities from 1914 to 1928, present maps of classification settlements, crop acreage, forest areas, and idle lands." An extensive field study was made in each county; soils experts from the college of agriculture examined and classified soil types with reference to their usability for agricultural crops and forestry; representatives of the Geological and Natural History Survey examined and classified the lakes and rivers, together with the fish and aquatic vegetation in them; the forest cover and the grasses and flowers of the county were inventoried and examined for trends in disease, and drought effects were noted; the game ranging the county was taken stock of; and the topography and geological situation of the county were examined by experts. At the same time an economic survey was made; maps were prepared showing the ownership of land—whether in public or private ownership, whether entered under the forest crop law or assessed as timberland, and whether tax delinquent or not. Maps were made of operating and abandoned farms, of the markets and schools of the county, of the public utilities, and of special industries such as wood-using industries in a timber county.

When this work had been done and put into usable form so that the committee appointed by the county board could prepare a zoning map from the material given, no further compilation was necessary; for, under the Wisconsin law, the county board may enact zoning just like any other ordinance. However, it has been thought better to bring the matter more directly before the people, and in each of these counties zoning has been accomplished through an extensive educational program based on the land economic survey.

Thus in the relation of a single part of a program of national development, that relating to forests, and ignoring for the time the interdependence of this part with other related parts such as those having to do with water, power, soil erosion, transportation, and public finance, we find the need for a nice adjustment of powers and policies allotted to each successive level of government, including the Federal, State, county, and even township units. It may be added that as early as 1911 Congress in the enactment of the Weeks Act authorized the States to cooperate through interstate compacts for the joint development of their forest resources, and that in establishing the Tennessee Valley Authority, a new type of regional unit, the relation between navigation and forest management was recognized.

b. Program, Problem, or Functional Areas

Political areas are not the only limiting areal factors which are involved, however, in the realization of a national forest plan. The United States Forest Service in formulating its program, also thinks in terms of another type of region, one marked by the homogeneity of forest type, or other peculiarities of forest conditions. Its program must therefore be integrated not only with the action of States and local governments—let us say, for example, Michigan, Wisconsin, and Min-

¹ Isalah Bowman, *Geography in Relation to the Social Sciences* (Scribners, New York, 1934), p. 198.

² Mary B. Trackett, Manuscript.

nesota—but also with the nature-determined factors of the Lake States cut-over region. It is equally obvious that in dealing with this homogeneous region its program will not only be related to the programs of the States within which some portion of this forest region falls, but also by man-determined factors of transportation and markets affecting forest industries, nearness to urban and metropolitan centers with their needs for recreational areas, and many other factors of regions that may not coincide with either the forest-type region or the political-unit region. A synthesis of these several considerations must at some point and in some way be made if the powers of the various governmental units concerned are to be wisely exercised.

c. Coordination Problems

There are three sources from which such a final synthesis, or comprehensive program, for a given area may be derived, each of which will be required to contribute its share. Two of these are governmental, and the third partly governmental. All the different levels of government—national, interstate, State, and local—and all the different departments in each of these, with responsibilities for dealing with the problems of the particular community or area under consideration must collaborate if adequate solutions for its problems are to be worked out and applied. Thus from the coordination of departments of government and the cooperation of the different units much of the comprehensive program must come. In the development of the port of New York, for example, there has been required the joint effort of many different departments in several States and cities, an interstate authority, a citizens' regional planning organization, and several departments of the National Government. But not least important in the development of policies have been organizations and individuals among the shippers, the merchants, and other groups whose functions in the whole economic system are vitally affected by the port development.

There is, therefore, a third source of policy which must be included in addition to those listed above. This is the group concerned with a single commodity (corn, wheat, hogs) or industry or trade (steel, retail dry goods) or service or profession (medicine). Organizations built about a commodity, service, or functional interest are today more clearly recognized as an important part of the directive institutions of the modern world. They have been given governmental recognition in many States of the world; in the United States this basis of formulation policy was reflected in the N. R. A. and the A. A. A. Direct provision for formulating Nation-wide programs for certain single factors, indeed, is recognized in older Government

departments such as the Forest Service and the Interstate Commerce Commission. In any given area, again, the policy fixed for a single commodity on a Nation-wide scale may have a very important—perhaps decisive—influence. A wheat-producing area will be conditioned in its planning by the wheat situation nationally and internationally; a steel town by the trends in the location of the industry generally; a port development not only by conditions in its own hinterland but by developments in communications through the country as a whole. The adoption of a national policy by such a single interest might create problems of maladjustment locally which preliminary analysis in cooperation with the other interests concerned might have avoided or for which some compensatory program might have been developed.

To different types of political areas with which we are familiar and whose activity to be successful must be harmonized, we must add the commodity or functional areas and the organized interest groups related to them. While their policies may not be as sharply delineated and the nature of their organization may be more informal than those of the political units, there is nevertheless an increasing tendency within governments themselves to evolve development programs based upon these single factors. The danger of distortions and maladjustments which arise when the impact of such programs is felt by other interests which have not been consulted is reflected in many controversies. Here again the necessity for relating the various interests and their peculiar contributions to a national program as a whole and a comprehensive program for each locality is a fundamental one.

For example, the future development of the Lake States cut-over region will obviously involve far more than a forest policy in the narrower sense of the term. It involves preservation of wildlife for the encouragement of future recreational use; protection of headwaters of streams supplying water for domestic use, power, and recreation for more thickly settled areas to the south; it requires special policies of public finance that will encourage permanent selective cutting of timber as against the mining of timber; it requires a coordination of railroad and highway transportation facilities best adapted to land uses and the public financial resources of the region; it requires special coordination of the kinds of public services that need to be maintained in the area and the resources available for financing them; and it requires a program of continuous research and investigation in order that policies may be kept flexibly in touch with any new knowledge and new trends in population movements, agriculture, and markets. Thus both in the formulation of a program and in its ultimate application to the last detail, several

types of regions, many departments of government, and all the different levels of governments have to be considered and integrated by some responsible staff of officials.

4. Natural Resources Entail Regional Treatment

It may be well at this point to speak briefly of the types of governmental functions related to national development with which regional considerations are of particular importance on Federal programs. It is natural that at the beginning of such an inquiry attention should be centered chiefly on natural resources and environment. Problems of land and water use, for example, are so obviously related to spacial and surface factors that one is inclined to consider the regional aspects of regional development largely in the light of problems of soil erosion, forestry, land use, navigation, flood control, and the preservation of wildlife. This assumption is apt to be strengthened by the fact that the powers of the Federal Government with which one is at the outset concerned in a study of national development, are delegated and limited under the constitutional system. Much of its operations have arisen through its ownership of land and its power to control the development of navigable streams. The earlier work of the National Resources Board and its predecessor, the National Planning Board, would seem to strengthen still further this point of view that regional aspects of national development have chiefly to do with natural resources. Thus the major reports on land utilization and land policy, water resources, mineral policy, and the Mississippi Valley all relate obviously to these fundamental and environmental factors.

But, as a member of the Board has pointed out:

We should guard against too narrow a view of the possibilities of natural resources development, attractive as they are. The economic crisis in the United States was not caused by erosion, serious as those inroads are in our soil assets; nor is unemployment due chiefly to lack of adequate flood control, calamitous as the consequences of floods are in many instances. It is too much to suppose that the proper development of our drainage basins will of itself solve the problems of the perplexed body politic. The problems centering around land and water cannot be solved in these terms alone, but require for their practical and successful treatment a full consideration of the broader but closely related aspects of agriculture, industry, labor, transportation and communication, health, education, public finance, and governmental organization.

Finally, human resources and human values are more significant than the land, water, and minerals on which men are dependent. The application of engineering and technological knowledge to the reorganization of the natural resources of the Nation is not an end in itself, but is to be conceived as a means of progressively decreasing the burdens imposed upon

labor, raising the standard of living, and enhancing the well-being of the masses of the people.⁵

This wider and more fundamental conception of national development, as a matter of fact, brings the natural resources factors into a relationship with the other powers of the Federal Government such as those relating to finance, credit, and interstate commerce. Thus the spending powers of the Federal Government either through a system of grants in aid, or the extension of credit resources or actual expenditure upon Federal public works will have a bearing and a decisive influence upon the developmental policy for a given area. A tariff policy may similarly affect, as we know from American history, the development of one region. The extension of credit to home owners or to municipalities or public corporations for housing purposes presupposes certain views as to future population trends not only in the particular city but to general regional developments as related to that city. Thus such powers which would seem on the surface to have but little regional significance, on closer examination may in their exercise be of the greatest importance. The struggle of different cities and regions throughout American history for transportation facilities whether by water or rail and implemented not only through Federal credit and public works but also favorable rate adjustments, is a tangible illustration of the fundamental sectionalism or regionalism which F. J. Turner has analyzed so acutely. Broadly speaking, Federal programs and policies tend to provide a general framework within which the policies of States and local governments are developed, and conversely the policies of the States and local governments are the necessary complement to Federal policies. Thus we may say that the natural resources or physical environmental problems are directly related to regions. The Federal Government by virtue of its powers through ownership or regulation relating to these resources has an obvious responsibility because these factors determine in the long run the location of human settlement, of industrial, commercial, and financial concentration, of lines of communication, and therefore problems peculiar to urban and metropolitan centers. While the development of cities may be peculiarly a problem within the scope of the powers of the States, the larger strategy of the development of natural resources in which both the National and State Governments share has a fundamental relation to them.

This flexible and evolving approach to policies of national development is reflected in the recent organization by the National Resources Committee not only of

⁵ C. E. Merriam, *Planning Agencies in America*, the *American Political Science Review*, April 1935, p. 201.

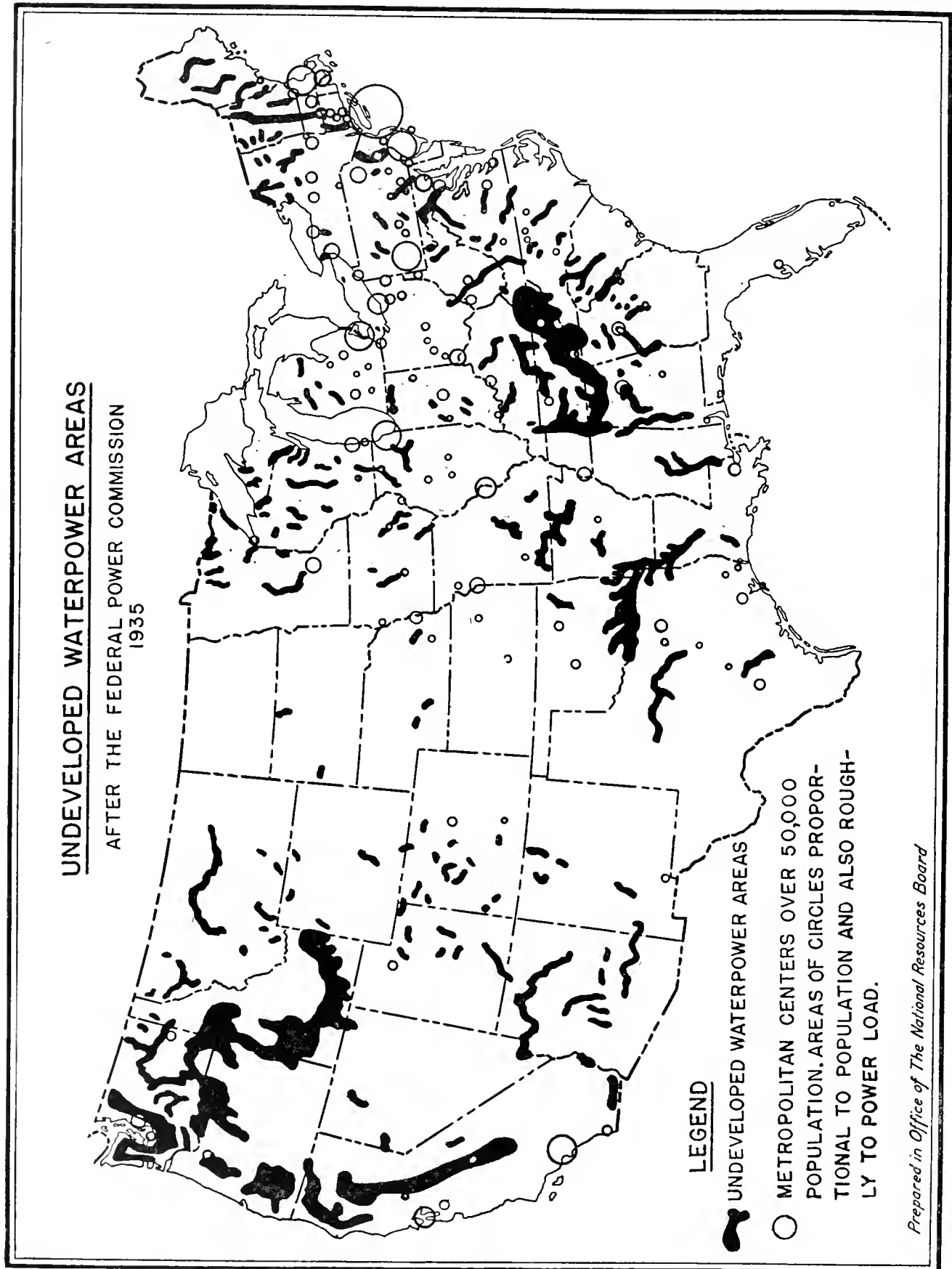


FIGURE 1.

its sections on land, water, and minerals, but also in its technical committees on industrial development and transportation and in its approach to the problems of urbanism and regionalism. It is perhaps even more strikingly indicated by the fact that the Board has turned to such agencies as the National Council on Education, the Social Science Research Council, and the National Academy of Sciences for the establishment of consultative committees. In the establishment of the technical committees on land, water, minerals, power, industries, and transportation there is evidence of the deliberate effort to bring together representatives of the various agencies of the Federal Government with major program and policy responsibilities in these representative fields. It is significant that in the final recommendations to the President—those contained in part VII—of the report of the Board of December 1, 1934, the conception of the necessary staff work of coordination is set forth.

1. That an advisory National Planning Board be set up consisting of five members appointed by the President of the United States, to serve as a general staff of the Chief Executive.

2. That the functions of the Board should be advisory and not executive and should include—

(a) Coordination of planning policies within the Federal Government.

(b) Coordination of planning policies between Federal, State, and local jurisdictions.

(c) Stimulation and assistance to the planning agencies within the Federal Government and in regions, States, and localities.

(d) Fundamental research directed toward the development of basic national policies and programs.

3. That the staff of the Board under a director be organized as a secretariat responsible for keeping in touch with planning agencies in departments and bureaus and serving as a liaison or agency with coordinating committees and special committees concerned with various aspects of national planning.

4. That continuing advisory committees, including representatives of Federal agencies primarily concerned, be set up dealing with long-time public works planning, land use, water resources, mineral policy, and mapping.⁴

5. Decentralization of Powers and Responsibilities

Due to the World War, the problems of post-war readjustment and the world-wide depression there has developed in all national governments a greater extension of governmental functions and a concentration of governmental authority. During the war, the necessity for increasing man power and production with the withdrawal of millions from ordinary employments to the armed forces made a careful husbanding of material and human resources essential. In the post-war turmoil, in many parts of the world political movements have consolidated their rule in attempting to

deal with the conditions which called these movements into existence. But over a much greater period of time, the increasing ease, speed and cheapness of communication in the widest use of the term have caused a relative shrinkage in the earth's surface in terms of the amount of time required to travel, to communicate, to transport power or goods. There is in consequence a massing of decisions to be taken at the center of the modern state unparalleled in history. Each of these decisions is registered more swiftly throughout the institutions and local communities of the Nation.

a. A Federal System Dependent upon Cooperation

In the United States this tendency to emphasize a Nation-wide attack upon problems arising out of a large-scale interdependent economic system has been balanced by the requirements of the Federal constitutional structure and the lines of political leadership with which it is interwoven. Thus it is possible to relieve through the States the pressure and concentration upon the political and administrative authorities in the National Government. It is possible to develop a wider recruiting of civic leadership and a broader base of operations. But such results are obtainable only if there is a deliberate and conscious effort made by both the National and the State Governments to work in cooperation in this attack upon problems whose solution requires the exercise of constitutional powers distributed among them. From this arises the problem of and the basic argument for a careful preparation of national programs of development through preliminary field explorations of the way in which policies affecting a given area may be unified, priorities established whereby both State and National departments proceed in their daily operations, and adequate and economical means of operation and financing be devised. From this point of view the establishment of such a procedure for preparing national developmental policies relegates the controversy over "State rights" to the background. The National Government in this way facilitates the States in the exercise of their powers and supplements them by insuring their effectiveness so far as the national policy is concerned. There is, indeed, no other way for solving most of our problems of government, since the powers of both levels of government are required in most matters. That such a conception of planning procedure is not fanciful is evident from the cooperative action of the National Government and the States in the planning procedure outlined by the National Resources Board and now followed by the National Resources Committee. Far from suppressing State initiative, the work of State planning has been stimulated, as the State reports testify. Similarly, the new social security program envisages a stimulation of State action in collaboration with

⁴ National Resources Board, Report, p. 6.

Federal action, and a similar relationship is illustrated for most national departments in their establishment of district offices through which cooperation with the States may be facilitated.

b. Interstate Problem Areas

But there are, as revealed in part II of this report, many evidences also of the existence of problems attaching to areas which are neither national nor co-terminous with a State. The solution of these problems require the exercise of the powers of both, and the efforts which have already been made in our history—through the use of informal planning organizations in metropolitan areas, through the use of the interstate compact and cooperation and otherwise—are briefly reviewed in part III. In part IV there is an analysis of the geographic factors which underlie many of these inevitable discrepancies between political boundaries and the areal extent of the problems which require governmental consideration, and an effort is made, through a study of the major problems involved in programs of development, to discover any composite grouping of these factors by area. In the concluding chapter, the reconciliation through administrative organization and procedure in planning, of the discrepancies between political boundaries and the extent of the areas involved is suggested. In the nature of the case, no perfect solution is possible. Thus, if one were given absolute power to redraw the State boundary lines in the United States, or the boundary lines of European states, there would remain under the most ideal conditions unresolved conflicts between extent of natural resources and problem areas, cultural interests, and political jurisdiction. Nor is the problem solved merely by destroying all Federal systems; the over-concentration of decisions at the center invariably leads either to some new effort to decentralize by law or administrative order, or the resentment on the part of localities toward certain national policies proves disruptive.

6. The Role of Regionalism

These facts are familiar to Americans. Throughout our history the role of the States in the Federal system, and the interplay of forces between them and the National Government, have been fundamental factors. This is true not only of the States, but of groups of States. From this fact has arisen a recognition of "sectionalism", whose importance has been demonstrated by the historian F. J. Turner. There have sometimes been efforts to suppress sectionalism by ignoring it; it has been viewed as a policy of selfishness and intransigence. Recently, however, it has been rec-

ognized as a factor of value and importance in the encouragement of a more varied and a richer life for the Nation, whereby the peculiar characteristics, resources, and contributions of the major sections of the country, and within each of its constituent parts, could be protected from invasion and suppression by ill-considered and hasty national policies. The very stimulation of the self-consciousness of the section may recruit a wider leadership for civic affairs, and a richer culture. Thus within the past two decades a regional approach to American life and its problems and opportunities can be found in the social studies, geography, literature, the drama, painting, architecture, history, and civic education. Controversies arise as to the true interpretation of the place of a region within the Nation and of the policies which it should follow. With the reduction in immigration, the closing of the great westward movement into unsettled country, the increasing influence of the historical societies, the growth of regional expression in literature and the arts, it is possible that the increasing ease of communication and economic interdependence of the Nation will be accompanied by a regional consciousness arising from more settled and self-conscious local communities. Nor should we ignore the possibility that this very economic interdependence may rest upon a more carefully conceived analysis of local needs and possibilities achieved through city, rural, and State planning. Such a development will increase, rather than suppress, local civic consciousness. City planners assert that the processes whereby local zoning ordinances are created invariably lead many citizens, for the first time, to see their local communities as a whole when they come to consider the relationship of their own house, factory, or store to the zoning plan and the relation of the zoning plan to the functions, needs, and opportunities of the city. Similarly the analysis of the role of the local community within the State from which it receives its legal authority, and of the natural resources or other area from which it derives its raw materials and in which it finds its markets and its recreational areas will inevitably have a similar civic educative effect.

To say this is but to point the way to ultimate issues, and not to answer them. What, for example, are the exact boundaries of these regions of which historians, artists, novelists speak? Will they eventually absorb both from the Federal Government and the States political functions that will lead to, as one writer terms it, a "United Regions of America"? Should such regions seek specialization based upon their peculiarities of resources and form an organic whole as a nation, or should they seek autonomous self-containment? These questions point to very fundamental

issues affecting the way of life and the ultimate ideals of the American people. It will appear cowardly and evasive to many not to attempt an immediate answer.

There is, however, a case for proposing to clear a way for relating such fundamental questions, at present explored by only a few people, to the ordinary every day problems that press upon us all. It is good that they should be raised, and it would be a valuable thing to see those engaged in formulating the policies of Government on all levels—National, State, and local—reexamine their problems and policies in the light of such long-range considerations. The process of planning, from this point of view, is not only important for immediate purposes of Government policy in the narrower sense, but is an aspect of civic education. Whatever facilitates such a self-analysis on the part of the citizen of the resources about him, of the kind of life he wishes to create from them, of the loyalties which he serves, will enhance, in the long run, the quality of his citizenship and of his Government. We cannot predict what answers he may be giving to these questions a century hence; we can, and should, make clear to him that they must be faced if he is to realize the best of the opportunities that America possesses.

We return to the fact, in conclusion, that these possibilities turn upon the inclusion of these considerations in the preparation of the policies to be followed by the National Government. It might too easily fall into the role of an elephant whose misguided maternal instinct leads it to sit on eggs with the fond hope of hatching chickens. By attempting too much, even with the best of intentions, it may destroy. On the other hand, by

careful preparation and cooperation, it may encourage the local communities, the States, and groups of States to realize the programs which they desire to achieve. The only answer to Federal problems is not necessarily in terms of jealousy and conflict. Each part is incomplete without the other.

7. Responsibility of the Chief Executive

The ultimate responsibility for outlining the coordinated policy of the national departments is placed, by our constitutional system, upon the President. The most comprehensive presentation of that policy at any one time, or in any one document, is the annual budget. Yet the figures in the budget must be based upon the more dynamic factors of the program which call for the appropriations requested. In preparing that program, the problem confronting the President is more difficult even than that of preparing a budget. He must not only see that the policies of the national departments are harmonious and not contradictory; he must not only see that account is taken of trends and tendencies in the major lines of production and distribution of goods and services; but he must also have some picture of the way in which the use of national departmental policies and powers is coordinated with those of the States. The facilitation of this preparation of the dynamic, continuing program of development and the indication of priorities in its execution, including its adequate operation and financing, is the task of his planning aids. In this report the regional aspects of this procedure are analyzed.

PART II

EVIDENCES OF THE PROBLEM

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CHAPTER I. THE CONFLICT OF POLITICAL BOUNDARIES WITH NATURAL AREAS

In the report of the National Resources Board (now National Resources Committee) dated December 1, 1934, the regional aspect of the subjects discussed is concrete evidence of the fact that political boundaries and jurisdictions do not fit nicely the areal extent of many of the most pressing problems of national development. Thus, for example, the recommendations concerning the development of land policies (p. 25) include the statements that—

It is highly important to provide at once, if practicable, for adequate coordination of Federal and State land policies, programming, and procedure.

To secure Federal coordination of land administration it is recommended that the major division of responsibility between administrative agencies be by areas rather than by functions, i. e., centralized responsibility for all the various functional aspects of land administration should rest with the agency responsible for the major form of land use within the area.

There is especial need for coordinating the land acquisition programs of Federal and State agencies in order that the pattern of public ownership and control may be made symmetrical and specific areas of land be put to uses and types of ownership most consistent with the general welfare. * * *

In the final analysis, land-use planning is of local as well as general concern because it must be locally applied, and the States should participate fully in land-planning programs. * * *

Again, in the discussion of water-resources planning, there are listed (p. 28) the major river basins which are suggested for analysis in the light of development projects based upon a variety of requirements such as flood control, preservation of water supplies, prevention of stream pollution, navigation, and power development. Here again the emphasis is placed upon an areal division based upon the functions and projects which must be considered comprehensively in order to find solutions to problems.

The section on mineral policies includes a similar recognition (p. 36) of the need for relating the areal extent of the problem with the legal powers divided among the States and the National Government, and it is recommended specifically that interstate compacts "should be encouraged", although it is recognized that in addition they "are likely to call for complementary action by the Federal Government." Particular reference is made at the same point in the discussion to the use of the then-existent N. R. A. codes for making possible policies within the various industries related to mining.

A special section on jurisdiction for public works (p. 62) gives in brief, but very clear form, the case for coordination of the different levels of government from the local to the national, and suggests the possibilities of uniting the duties of several jurisdictional levels in the same official, as is now done with the county agents, and of establishing "regional councils, agencies and authorities." It is suggested that "Far from injuring local or central government, such readjustments would in reality strengthen them, by allocating functions and powers to appropriate agencies and units. Instead of leaving the smaller units of government to starve or eke out a miserable existence in many cases, it is possible to revive and restore them by setting them up in a vital relationship in which they may function practically instead of theoretically."

In the present part of the report evidence is collected which illustrates the problem revealed in the studies already made by the National Resources Committee and referred to above. Those studies centered not upon political jurisdiction, but upon major planning problems—land, water, minerals, public works. We are here selecting, however, illustrations of the way in which the States, local governments, and the National Government have in the exercise of their allotted powers revealed that any one of them alone cannot deal in a satisfactorily comprehensive way with many of the problems confronting it. This is because of the areal extent of that problem, and the functions of government necessary for its solution, beyond their borders or their constitutional grant of authority. In part III, examples of the devices which have been employed by them in meeting this situation are given. There is not, therefore, any sharp line of separation between the contents of the two parts.

This comment, perhaps, should be made in advance. The fact that in the present discussion the emphasis is necessarily placed upon inadequacies of power, and jurisdiction should not lead to a distorted view that the agency discussed therefore serves no useful purpose. The fact that a State, for example, finds itself severely hampered in its planning because of the fact that its water resources are affected by a stream which is subject to some control in adjacent States and by the National Government, or finds its problems greatly complicated because of the divergent character of different

parts of its area and their consequent close relationship to portions of other States, only increases the importance of deliberate and conscious self-survey of the possibilities of coordinating its own policies and powers with those of the other governments affected. We may reemphasize most strongly the comment quoted above from the report of the National Resources Board that such a policy would strengthen and not weaken all the governments concerned by making them serve a vital purpose more adequately. They should, in short, seek not to supplant, but to supplement, each other.

The limitations placed upon the States by the provisions of the Constitution of the United States and the interpretations of them in decisions of the Supreme Court (notably under the fourteenth amendment) and the restrictions placed upon their own governments and municipalities by their State constitutions are only a part of their restrictions in their development programs. The analysis of the State planning reports prepared during the past 2 years reveals other restrictions created by nature, in that the areal extent

of single factors may prevent them from exercising any effective control over that portion of the problem actually within their political and constitutional jurisdiction. Again, they may be prevented from action by the fear that differential disadvantages, such as increased costs of production in comparison to other States, will result. Unofficial efforts have in some areas been made to coordinate planning of development programs among several communities separated by State boundaries yet comprising a metropolitan district. Parallel to such efforts is the rise of a formal movement for facilitating State cooperation based upon the principle that such cooperation may enable the individual State to realize its potential position in the national system more successfully and effectively. Finally, within the departments in the National Government there is a great body of experience revealing the need for closer contact in the field with the variety of factors which should condition flexibly the planning and execution of policies by national agencies and illustrative of the attempts to meet this need through some system of districting.

CHAPTER II. REGIONAL ORGANIZATIONS FOR PLANNING ON AN INTERSTATE BASIS

There have taken form in recent years three principal types of organization for interstate regional planning: first, the metropolitan regional planning agency; second, the group-of-States regional planning organization; third, the Tennessee Valley Authority. All three types constitute evidence of the problems considered in this report. These regional organizations for planning were created in situations where the formulation of integrated policies and programs for development require treatment of areas which transcend the boundaries of a single State.

1. Large-scale Planning Projects

The Tennessee Valley Authority and the most advanced group-of-States regional planning enterprises, those in New England and in the Pacific Northwest, represent more than evidence of the regional factor in national development planning; they also constitute significant attempts to solve the problem on a large scale. Accordingly, they are discussed more fully in part III of this report, along with other outstanding attempted solutions.

In the Rocky Mountain section another large interstate regional survey project is under way. While not yet (July 1935) crystallized into a definite organization for planning, this project also evidences definite recognition of the need for development planning on an interstate basis. Built on the initiative of a few individuals, the universities, and the chambers of commerce, a regional survey of a huge area has been undertaken. The area includes all of Colorado, and parts of Wyoming, Utah, Arizona, New Mexico, Kansas, North Dakota, and South Dakota. Like the metropolitan planning enterprises, this survey project emphasizes the commercial dependence of the territory upon a single metropolitan center, in this case Denver. The Rocky Mountain survey has assembled valuable research studies, and it has instituted some coordination among Federal agencies. Committees have been organized and a research staff has been supported through the aid of individuals, chambers of commerce, the universities, and the relief administrations. While the project has scarcely reached the stage of regional planning, it does manifest the dominating realization that the problems of the territory have to be attacked on a wide interstate basis. Further, it is one illustration of

the way in which those who attempt to deal with the development problems of a great region seem naturally to select a metropolitan trade and cultural center as the focal point and center of planning for the region.

2. Planning for Interstate Metropolitan Regions

Within the United States, six interstate metropolitan regional planning organizations are now in operation, centering in Washington, D. C., New York City, Philadelphia, Chicago, St. Louis, and Kansas City. There is much in common among these planning enterprises; their origin, purposes, and work are, for this investigation quite similar, although some of them are further advanced than others.

In each of these six projects the initiation of regional planning was due to an increasing need for coordination among the many governmental units having jurisdiction within the region. In each case, the distinctly regional problems, and hence the regional area, were found to overlap State boundaries. The New York, Philadelphia, and Chicago regions lie in 3 States, the St. Louis and Kansas City regions in 2 States, while the Washington region includes the District of Columbia and parts of Maryland and Virginia. As indicated on the accompanying map (see fig. 2), these metropolitan regions include areas somewhat larger than that of the central cities themselves, but at the same time much smaller than the territory which may be considered "tributary" to these cities. Generally speaking, the regions include only the metropolitan urban and suburban areas.

The Washington regional planning work, conducted by the official National Capital Park and Planning Commission, possesses planning authority granted by Federal statutes.

None of the other five has legal status by virtue of State or municipal legislation, but each has representation of official agencies in the planning organization. The New York and Philadelphia projects have derived their financial support entirely from unofficial sources; the Chicago, St. Louis, and Kansas City projects are supported by both unofficial and county appropriations. All five are set up unofficially as *planning* enterprises. They have the advantage of being in a position to give relatively detached, unpolitical consideration to the regional development problems; they are relatively

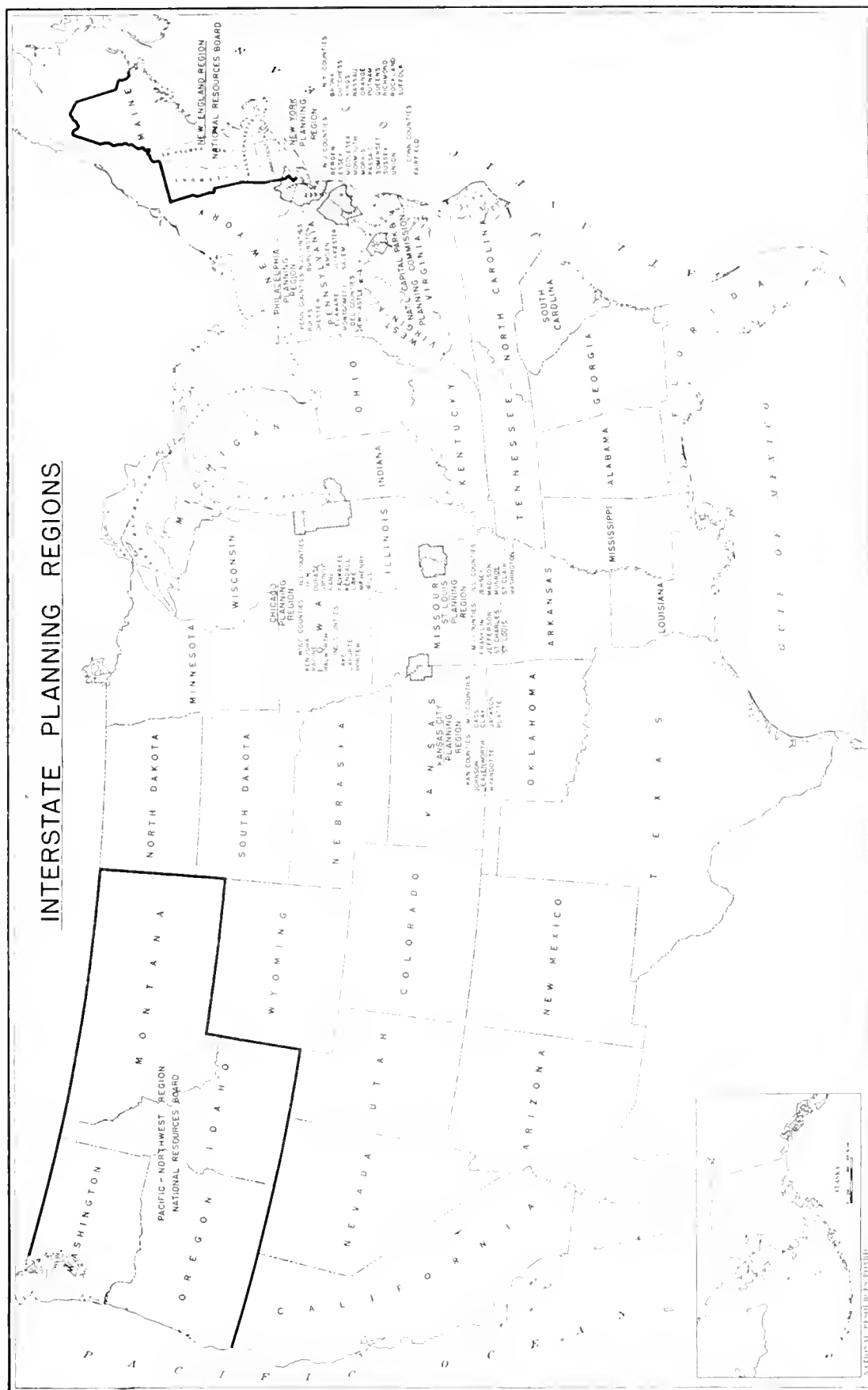


FIGURE 2.

uninfluenced by special political and private interests. Conversely, all five have the disadvantage of being set apart from the directly responsible governmental administration, so that their findings and recommendations may be, and in some instances have been, too easily ignored by official bodies. If there had been effective official metropolitan, State, and Federal machinery for the coordination of programs and the preparation of integrated plans for these five metropolitan regions, it is possible that the unofficial agencies would not have been found necessary. Meanwhile, these planning enterprises have proven themselves useful and they will probably not be replaced until such time as their functions can be absorbed by agencies acting as arms of metropolitan governmental units, created by legislative act in the States where the regions are situated and empowered to collaborate in producing regional plans.

Each of these organizations has undertaken to coordinate the otherwise more or less piecemeal programs of the several adjacent and overlapping governmental units, in such fields of development as harbor work, highways and bridges, parks and parkways, and zoning and the control of land subdivision. All five have proceeded from the stage of regional surveys and regional coordination to the stage of creative planning, devising, and initiating plans and programs which would probably not have emerged except through a regional planning agency. This is particularly true in the case of the New York and Philadelphia operations, which are somewhat more mature than the others in this respect.

The programs and plans devised by these five unofficial regional planning agencies are to some extent predicated upon the programs of Federal agencies. For example, the Federal harbor and waterway programs underlie the regional plans for railways and highways. Conversely, the regional plans tend to influence and cause adjustments to be made in the Federal programs. In any event, the regional planning offices are valuable sources of information for Federal agencies and they help to reconcile and integrate the Federal and State programs with the local plans. Furthermore, the records show that many projects originated or crystallized by the regional planning agencies came to be carried out by governmental bodies.

The National Capital Park and Planning Commission is unique among the metropolitan planning organizations. It was created and it operates under statutory authority granted by Congress in an act passed in 1924 and amended in 1926. Its work focuses in Washington, the center of our National Government and one of the finest of our large cities. In some fields of planned development, the effectiveness of its work exceeds that of any of the others. Like the Commis-

sioners of the District of Columbia, who constitute the core of the local government in the National Capital, the Planning Commission is a Federal agency. It is composed of several officials of the Federal Government, 1 Senator, 1 Congressman, and 4 members appointed by the President. The Commission's ordinary operating expenses are provided by Congress as a part of the District of Columbia appropriation. Special funds for acquiring park lands were provided by the Capper-Cramton Act of 1930. The planning function of the Commission is very broad, touching upon all elements of physical development. For studies and the preparation of development plans the region is described in the 1926 act as "the National Capital and its environs in the States of Maryland and Virginia." At the present time the region so described is considered to comprise the District of Columbia and two adjacent counties each in Virginia and in Maryland, including the municipalities lying within those counties. But the "region" is *flexible* and may be extended or contracted, as circumstances require.

The Commission's planning work within the District of Columbia is effective because it is done by an established arm of the Government and done for the use of that Government. In the matter of highway location the Commission is given the responsibility of making decisions which are binding upon the other agencies of the District government.

Outside the District, but within the region, three unusual devices are utilized for making the planning work effective.

First, in accordance with the terms of the 1926 act, the Commission collaborates "with such representatives of the States of Maryland and Virginia as may be designated by such States for this purpose." The regional plans are developed in Maryland by collaboration with the Maryland-National Capital Park and Planning Commission, which was created by the legislature of Maryland to exercise this function. In Virginia the counties and cities collaborate, pending the creation of an agency specially designated for the work. Through this cooperation of several levels of government, coordinate planning is done. Here is a clue to the solution of some of the problems of large scale regional planning.

Second, the National Capital Park and Planning Commission is empowered by the 1926 act to purchase or condemn lands for parks, parkways, and playgrounds in this region, and the 1930 act provided funds for that purpose. However, outside the District of Columbia, this function again is exercised through collaboration with the designated agencies of the States of Maryland and Virginia. The whole program was

developed jointly—in planning, in selecting purchase areas, and in determining the allocation of costs as between the Federal Government, the District, and the States. All of this *preceded* the preparation and passage of the Capper-Cramton Act and the execution of the agreed-upon schemes. Before legislative authorizations are made, planning is carried to a conclusive point in this metropolitan region through the coordinate work of agencies representing several different governments. Here again is important evidence bearing upon the questions reviewed in the present report.

Third, the Commission has organized a series of functional committees, on recreation, drainage, and sanitation, etc. In form the committees are not unlike the arrangements made by other metropolitan regional planning agencies. But in this case the committees represent an *official* arm of government, and by virtue of this fact, and because the Commission had prepared comprehensive plans, the committees have been able to materially assist the neighboring State and local governments in selecting development projects, in securing funds for them (e. g. through the P. W. A.), and in fitting them into a general development program. As with the other two points mentioned above, this procedure illustrates for a metropolitan region some of the possibilities of collaborative advance planning for large-scale regions.

These metropolitan regional planning enterprises indicate the existence of interstate development problems and the recognition of such problems. They also

reveal a certain strong community of interest and objective throughout the interstate metropolitan regions. And they are of service to Federal, State, and local governments. However, it is obvious that for broad Federal and State development planning, the metropolitan region is too small and too specialized an area. To be sure, it possesses a degree of organic unity, and it must be dealt with as an urban planning unit. Accordingly it must be recognized in State and National planning.

But the region for national planning should represent organic relationship as well as organic unity in such fields of development as transport, land use, recreation, power, use of water, redevelopment of forests, conservation of mineral resources, etc. The metropolitan regions are in a real sense the nuclei of such larger regions extending over vast areas. These larger regions may encompass the organic relationship between the production of raw materials from our natural resources, the production of goods from those materials, the distribution of the goods, in fact the whole economic and cultural structure within which we live and which we are constantly reshaping. In any investigation of the processes by which our society operates, and in any attempt to strengthen those processes, the large interstate region, with its core in the metropolitan area, emerges as one important type of region for planning purposes. And the metropolitan city may, in some cases, constitute the natural center of planning for the larger region.

CHAPTER III. STATE PLANNING EXPERIENCE

The problem of regionalism would seem to emerge quite sharply from the experience of State planning boards. At the outset it may be pointed out that the benefits of State planning have been very great not only to the State governments themselves but to their citizens individually. It has enabled the citizen to visualize his State as a whole. For the first time, it has made him see his farm or business enterprise as an integral part of the total State economy.

The ensuing discussion, however, is made without reference to the positive values and benefits of State planning. Rather, it concerns itself with those indications of the inadequacy of planning on a State basis only, and with problems which are so essentially interstate in character as to demand regional treatment. These are here presented, not in the spirit of adverse criticism, but as one more evidence of the need for dealing directly with regional factors in any planned program. Furthermore, it should be pointed out that lessons learned on the State planning boards are today what makes regional planning a possibility. The very variety and heterogeneity within most States have taught the planner the need for fitting unlike areas into a larger planned mosaic, and have paved the way for his recognition of and ability to think in regional terms on a subnational scale. They have also revealed the impossibility of dealing in intrastate terms with problems which are essentially interstate in character. Thus State planning experience not only reveals the presence of the problem of regionalism but provides one of the major incentives for making regional planning and coordination a reality.

1. The Beginning of State Planning

State planning began in an experimental way, a good many years ago, but only during the last 6 years has it emerged in organized and definite form. New York in 1925, Wisconsin in 1929, Illinois in 1930, and Iowa in 1931 were pioneers in the present movement. In 1933 the National Resources Committee (then known as the National Planning Board) undertook to encourage and foster planning in the States. New Hampshire and several others responded immediately, and additional States rapidly enrolled in the program until at present, there are 46 planning boards or commissions in operation. Most of these have prepared and released progress reports and preliminary plans.

An examination of the 38 State planning reports which have already appeared shows that planning officials have so far engaged in two types of activities.* First, the collection of data which deal with functions, trends, and specific areas. Second, the formulation of programs and policies wherein improved material patterns and new relations to resources are to replace existing maladjustments.

2. The State Planning Program

The subjects dealt with in the State reports include nearly the whole range of physical, biotic, economic, human, and institutional resources. This great variety may be reduced, however, to a relatively small list of subjects as follows:

- (a) Land resources and use.¹
- (b) Water resources and use.
- (c) Mineral resources and use.
- (d) Commerce and commercial assets.
- (e) Manufactural resources and development.
- (f) Transportation facilities and patterns.
- (g) Urban formations and their problems.
- (h) Recreational needs and resources.
- (i) Population and human resources.
- (j) Social conditions and institutions.
- (k) Local government and public services.
- (l) Public works needs and programs.

A scrutiny of this list of topics serves to show that three things are involved: (a) The basic resources of the natural environment, (b) the pattern of cultural works and constructions, and (c) the inherent relationships which exist between the two. At the outset, the question may be raised as to how effectively can a State government perform its two planning activities in relation to the area over which its sovereignty gives it jurisdiction. Most statistical data are at present collected and tabulated by county, township, or other administrative district, or for the State as a whole. Such data can be of actual value only if the political divisions for which they are collected are related to or express the functions, trends, or special areas which

* These 38 State reports are summarized in "State Planning: A Review of Activities and Progress", by the National Resources Board; pp. 308, Nov. 1935, Government Printing Office, Washington, D. C.

¹ As used here the term *land* connotes more than mere soil; it is thought of as a composite factor including soil, relief, and attached scenic and biotic resources.

are to be treated. Since political lines have not generally been drawn with regard for either natural resources or cultural patterns, many of the data at hand fail to be of maximum usefulness.

In regard to the second activity, namely, the formulation of programs and policies, the same test of effectiveness must be applied. Were the relationship of human works and constructions to the basic resources wholly harmonious, there would be no need for planning, but in most instances maladjustment in some degree is present. While both the existing maladjustments and the proposed readjustments are related to trends and functions, they bear an even more obvious relation to specific areas. In other words, over-all programs and policies may be formulated for social and economic functions in general, but in their detailed application they must be designed to fit specific areas. If this be the case, the nature, extent, and degree of homogeneity of the total territory over which planning can be exercised from any given center are of major importance. An illustration of this may be drawn from the field of land planning. Suppose, for example, that a State were composed of five dissimilar natural land areas, for all of which the function of land use must be dealt with. Any general functional plan for land use will obviously fail in greater or lesser degree to fit these five individual areas. At the very outset, therefore, the State planning board is compelled to formulate five separate plans for this single function. Furthermore, for such of these natural land areas as extend beyond the State boundaries there can be no assurance of similarity of treatment for the extrastate portions, nor any great likelihood of the politically severed portions being viewed as a whole.

State planning would seem, upon first inspection, to offer an entirely satisfactory method of dealing with most problems. And this would indeed prove to be the case if the States were approximately natural or economic units. An analysis of the geography of the individual States reveals that they seldom possess any significant unity of either natural or economic characteristics, and hence their jurisdiction does not coincide with problem areas. The following brief description of the modes of State origin serves to show why this is the case, regardless of what might be desirable.

3. The Regionality of States

The eastern seaboard States originated from early land patents and grants, and hence settlement and economic development followed the lines thus arbitrarily imposed. Farther west, trans-Appalachian settlements grew up along the rivers and other convenient lines of access. When these settlements became nu-

merous enough in any general locality, they were grouped together into large areal units bounded by rivers and survey lines in such manner as to provide fairly compact, contiguous State areas. In western United States, the process was even more arbitrary. This great expanse of territory was laid out in quasi-rectangular areas, their settlement encouraged and, whenever they reached the necessary minimum of population, they were given statehood. In some instances, considerable subdivision and recombination were necessary in order to achieve this result.

The outcome of these circumstances of State origin is that no State is actually a unit socially, economically, or physically. In most instances, it is not even a unit in political sentiment. Whatever unity the States possess resides solely in their constitution and they have, therefore, regionality only by designation.

"In going from State to State, one will frequently find that crop specialization and agricultural methods are identical. This is so because the opportunities afforded by the physical environment for the raising of certain crops are identical."² This is equivalent to saying that the fundamental resources which man uses and adapts to his needs are distributed without reference to political lines. Broad combinations of resources may extend over several States, but in few instances do they include the whole of any one State. Thus any given State may fall into two or more regional units. In view of this situation it is difficult to formulate a plan for a State. There is almost nothing which can be said about an entire State, and almost no recommendation can be made which is applicable to the entire State. Even in the few instances where a State is relatively homogeneous throughout, that homogeneity usually extends far beyond State boundaries. Consequently, the area demanding planning consideration is necessarily interstate in character, and no final recommendations can advantageously be made, except in the light of the larger area of which the State in question is a portion.

So significant is this discrepancy between political lines and functional limits, that it has resulted in proposals from many quarters for the redrawing of State boundaries. As early as 1923, Warren H. Manning, of Cambridge, Mass., worked out in great detail, plans for recasting the areas and boundaries of the States.^{2a} On January 5, 1930, the Chicago Sunday Tribune published four maps showing possible and desirable ways of redividing the Nation into States. More recently, Dr. W. Y. Elliott,^{2b} of Harvard,

² J. E. Pomfret, "The Geographic Pattern of Mankind", N. Y. 1935, p. 6.

^{2a} "A National Plan Study Brief", *Landscape Architecture*, July 1923.

^{2b} "The Need for Constitutional Reform."

has presented his opinion that a United Regions of America would in several respects be superior to a United States of America.

This however is not the way out of the difficulty for it is probably neither possible nor desirable to alter State boundaries. The territorial arrangements involved in the States have been "frozen" both legally and psychologically for so long a period that the disadvantages in changing them would outweigh the advantages. Moreover, the very fact that the States are heterogeneous units seems to be of considerable value politically. The attendant disunity of interests and clash of objectives provide a perpetual guaranty of those checks, balances, and compromises which are the backbone of the American political system.

In spite of these manifest limitations there are impelling reasons for planning on a State basis. The power to plan resides constitutionally in the States. This is necessarily so because, as originally conceived, the State was designed as the fundamental unit of sovereignty, a principle which, has not been superseded and but little weakened by the development of general Federal power and authority. More exactly stated, planning can be done by any individual, social group, or governmental unit, but the power to carry out many types of plans, particularly those on a comprehensive scale, lies in the State constitution, and this power must be resorted to in the majority of instances. Counties and municipalities must receive their right to zone and carry out many aspects of resource development from the State, through charters and enabling legislation. Even the Federal Government in many restricted instances, can acquire land and other resources, and carry out certain types of development projects, only through the consent of the State.

Many aspects of American life are organized upon a State basis. Men have State consciousness and State pride; there are in existence State forests, parks, highway systems, and game preserves; there is State machinery in operation to deal with many if not most of the problems with which planning is concerned.

4. The Nature of Regional Planning

Planning and planned development may be defined tentatively as the devisal of new cultural patterns to overlie harmoniously the physical environment and its resources. This would appear to be largely a physical problem, but the appearance in this case is somewhat misleading. The engineering aspect of such a developmental program is unquestionably physical, but planning and program making cannot be approached solely from the engineering standpoint. On the contrary, they entail a "complete analysis of all the factors and

relationships which go to make a potentially prosperous area." This is equivalent to saying that a pattern of works and construction must be planned in terms of the intrinsic characteristics of the area for which it is intended. It is patent, therefore, that the whole meaning of regional planning is to devise a cultural pattern which will fit a large areal unit, and that the qualities inherent in the area not only dictate in large part the features of that plan but also its territorial extent.

At this point, the question of the relation of States to regional planning intrudes itself. Without attempting to deal with this directly, one is compelled to formulate a statement which must be one of the major considerations of the regional planner, viz, "Planning problems plainly adhere to geographical peculiarity, whereas planning control adheres to State and other political peculiarity. As a consequence, the areas involved are so different in extent and nature that they cannot, under our present system, be made to coincide."

Since States are not economic or natural units, it is obvious that State planning alone does not provide an adequate solution for regional planning. As E. S. Draper points out, "Although the happiness of the people in an area may depend upon the type of its physical development, its prosperity will depend upon the efficiency, and convenience, and completeness of the functioning of its economic life. The goal of planning has been defined as security and opportunity, which is only another way of emphasizing the economic approach and its importance in physical planning, and it is at this crucial point that State planning falls down. State lines cut as surely across economic tensions as any arbitrary unit which can be imagined, be it watershed, or Japanese-beetle quarantine. Railroads, highways, rivers, topography, land use, do not change character at State lines, but have common characteristics and problems which must be studied by one agency, not a cooperating group.

"This arbitrary quality of State lines is being increased by the trend to mobility on the part of goods and people. Interstate truck transportation presents problems entirely beyond the scope of State authorities, both in regulation and in analysis of the activity. Pennsylvania can, for example, plan a regional park in the Poconos, and can even plan for the use of the park by metropolitan New York, but it cannot plan the approaches, which lie wholly within New York and New Jersey."³

³ E. S. Draper "Regional Planning and the Tennessee Valley Authority", lecture before the Harvard School of City Planning, Jan. 14, 1935.

5. Supra-State Problems

Any analysis of State planning reports which have been prepared to date, serves but to multiply such examples. For water-resource planning and for the devisal of water engineering projects, the hydrographic area is necessarily the unit involved—a unit which usually cuts across State lines. (See fig. 1.) The majority of water problems are essentially interstate in character. The struggle of Massachusetts, Connecticut, New Hampshire, and Vermont to effect the control of pollution in the Connecticut River is a significant example. In such a setting individual State planning is well-nigh powerless to deal with a problem of this character. Moreover, the disregard of such a problem by a single State may practically nullify the earnest attempts at solution by other interested States. This, however, is not equivalent to saying that hydrographical units are regions suitable for general planning; most experience points to the contrary in that it shows that many planning operations emanating from a region set up on this premise tend to ramify far beyond the lines of water parting.

In the majority of instances during the last 2 years, water resource development in some form or another has provided the urge for large scale programming. This is reflected in nearly a score of bills or proposed bills seeking to create river-basin authorities by congressional action. At first thought, an area covering an entire river basin might appear to be a logical and desirable region for planning and planned development. This certainly appears to have been the thought behind the creation of the Tennessee Valley Authority. Upon closer inspection, however, this proves not to be entirely true. For navigation improvement, hydrographic survey, erosion control, and power installation, the river basin is entirely satisfactory, but after these have been accomplished, there remain to be dealt with many deep-seated, long-time problems which are not related to any particular flow of water. Already this fact has begun to emerge from the experience of the Tennessee Valley Authority. Its power-distribution program must eventually overflow the basin completely; indeed, its first sale of electric power was made outside the Tennessee Valley. Moreover, land-use, industrial and social problems are not peculiar to the Valley, but are fragments of a larger Appalachian pattern, and so on for many functions which could be enumerated. The conclusion which one is compelled to draw is that when all factors are considered, river basins as regions are, in many instances, but little better than States for purposes of planning and development.

One of the more important phases of the national planning program lies in the field of crop production. Owing to the strictly regional nature of agricultural

occupance, however, the problem does not lend itself to any fractional treatment. State planning has, therefore, so far been unable to deal directly with this important function, because crop regional boundaries bear no relation to State lines. In order to deal with it the United States Department of Agriculture and the Agricultural Adjustment Administration have had to undertake crop-production planning upon a national scale. Using a statistical basis, they have divided the country into some 800 type-of-farming districts; these were then combined into approximately 100 subregions; and finally these latter were grouped into 12 major regions, each representing the locus of production for a given crop or combination of crops. (See fig. 25A.) Several of these regions are, of necessity, composed of noncontiguous areas. Using these regions as areal bases, the Federal Government has determined regional policies, formulated plans, and devised farmer contracts for each agricultural region in order to effect crop-production control. This, however, is only one way of accomplishing that end. If some new regional organization were devised, this field of planning might cease to be a direct responsibility of the Federal Government and become the concern of the States. The areal units involved, however, are of such extent and outline as to compel interstate treatment. Planning, operating on a State basis, therefore, cannot be adequate in the field of crop production planning, and hence it has been left to the Federal Government. The inevitable result has been the growth of a feeling of resentment against being told from Washington what crops may or may not be produced and in what quantities.

Land-use programming exhibits perhaps the most striking example of the inadequacies of planning on a State basis. Land-use problems were reported and mapped, State by State, as the first step toward acquiring data for a national land program. Theoretically, the problem was a clear cut one; certain broad areas were known to be characterized by major resources and to exhibit general types of maladjustments, and it was believed that to delineate these areas would be a comparatively simple task. When the State maps were assembled side by side, it was obvious that there were glaring discrepancies present. For example, on one side of an invisible State boundary, an area was adjudged submarginal and recommended for retirement from cultivation; on the opposite side, it was regarded as good agricultural land requiring merely farm enlargement or some other method of treatment. In some of the Great Plains States, lands which were similar to one another were variously designated as agriculturally submarginal and suitable only for range use, as valuable for dry-farming but demanding farm enlargement, or



PORTIONS OF THE STATES OF TENNESSEE, NORTH CAROLINA,
ALABAMA AND GEORGIA

SHOWING LAND ADJUDGED AGRICULTURALLY SUBMARGINAL. NOTE THE
DISCREPANCIES ACROSS STATE BOUNDARIES.

Prepared in the office of the National Resources Committee

Source: State Land Planning Consultants Maps, Jan. 1935

FIGURE 3.

as needing no major changes in use. This reveals the presence of such dissimilar opinions in the several States as to render difficult the development of a harmonious regional pattern of land-use. In the Southern Appalachians, some States classified certain land as requiring reforestation, other States marked similar land to continue in agricultural use if auxiliary off-the-farm income could be provided. Here, again, lands adjudged submarginal by one State planning board may be separated by nothing more than an invisible State boundary from lands adjudged suitable for occupancy by planning officials of a neighboring State. (See Fig. 3.)

A few States have considered the problem of planning for industrial locus, but progress along this line has been scant. Industrial concentration and decentralization, potential industry development, and rural industrial subsistence homesteads, have been approached, but such phases of the problem are so essentially regional as to be almost impossible to attack from the State angle. The last mentioned, particularly, is related to regional rather than to local factors, subsistence homesteads for rural industry being only part of a larger phenomenon, viz, conjunctive part-time occupational adjustment. Other aspects of this are forestry-agriculture, recreation-forestry, mining-forestry, farming-range management, fishing-recreation, and several other combinations, all of which depend for their success upon being placed in the "shadow zones" which lie between areas zoned or planned for particular land uses. So regarded, they become parts of a broad regional picture rather than projects growing out of local conditions and needs: The same may be said of industrial development in general; it is not a matter which can be dealt with from a narrow local base. In the first place, industrial development comes not as a result of deliberate plans and programs, but of the operation of a delicately balanced ecological equation, wherein the various elements act as locative factors under certain conditions. The fact that more than two-thirds of all value added by manufacture in the United States accrues in the northeastern urban section, suggests that regional factors beyond the control of any one State are involved. Consequently, any State lying within that region is faced with the necessity of participating in a general regional program for industry. Conversely, any State lying outside that region should not hope too sanguinely to become a major industrial area, but must confine its efforts to planning for those industries which are not subservient to general locative principles.

In the field of transportation planning, much excellent work has been done by State planners, but no general coordinated results have been secured. In

some instances emphasis has been placed upon waterways, in others, upon highways, in still others upon railways, airways, terminal facilities, or flow of commerce. Rarely do the plans match across State boundaries in even the most general terms. Furthermore, transportation planning should involve several elements, e. g., metropoli, pattern, individual transporting media and equipment, areas of traffic source, and destination areas. Seldom do all these elements lie within a single State and therefore State planning needs to be supplemented by some form of interstate regional approach in order to cope with the problem.

6. Objectives Versus Realities

State planning has accomplished much and promises much more for the future. Considerable evidence, however, has emerged so far from the work of the various organizations participating, to suggest that State planning as it is now constituted is not adequate to meet all problems of planning on a subnational scale. Just what is the answer cannot at this point be stated categorically. In the first place, while it is commonly believed that some form of regional organization should supplement the State approach to planning, there is no general agreement as to what should be the geographical premise of that regional organization. In certain quarters it is felt that the object in establishing planning regions is principally to gain a larger operating territory—one within which a subnational economy can be erected. In other quarters the object would seem to be to secure a different kind of territorial unit, regardless of size—one within which specialized problems are sufficiently localized to permit of expert treatment and wholly included so as to allow for complete handling.

The whole matter would seem to reduce to a somewhat paradoxical situation, viz: That in the States and only in the States, reside many of those powers necessary to make planning and planned accomplishment a reality. At the same time, the problems to be treated do not follow State lines but resolve themselves into regional units, and hence do not often lend themselves to treatment by existing political arrangements. The solution would seem to be a regional organization authorized by and based upon a combination of Federal and State powers, for planning; and interstate compacts, Federal corporate authorities, Federal-State corporate authorities, or other devices suitable to specific cases, for carrying out planned development programs.

In order to accomplish the desired objectives, it will be necessary to proceed in such manner that regional

planning will materialize out of State powers. It should be assumed that State planning will continue, but that it may be usefully redirected into somewhat different channels than at present, e. g. interstate coop-

erative planning. In this, the Federal Government has a role to play in lending encouragement and in devising nuclei about which State planning efforts will come to cluster.

CHAPTER IV. THE INTERSTATE COOPERATION MOVEMENT

Further evidence of the difficulty of adjusting constitutional jurisdiction to an area extending beyond the boundaries of a single State in which a problem requiring governmental action for its solution resides is found in the efforts of the States to cooperate in the administration of some of their functions. The most formal result of this effort is to be found, historically, in the employment of interstate compacts, and this is discussed in chapter VI. But very recently there has developed an organized effort among the States to extend and facilitate cooperation generally. It has been stimulated by more pressing need for cooperation in the administration of tax policies, law enforcement, and the apprehension of criminals, and the maintenance of minimum labor standards; but no limit has been placed upon the extent of State functions which might be the subject of cooperative action. The movement is too recent to evaluate as a solution of problems; it is too considerable to neglect as an evidence of their existence.

1. The Council of State Governments

Within the past 10 years there has developed an American Legislators' Association, representative of State legislatures of the 48 States and equipped with a central staff. This organization was founded to provide a means of cooperation between the various State legislatures and, in particular, to supply interstate research and reference services. More recently it has fostered the establishment of a Council of State Governments, which adds to the legislative representation that of the executive departments. Under the auspices of these organizations various conferences have been held, and more particularly two interstate assemblies. At the most recent of these, held March 1935, in Washington, a wide range of problems common to all of the States was discussed by the delegates drawn from practically all of the States of the Union. It became clear to those participating in this movement that some form of permanent and continuing agency for fostering cooperative research and action concerning problems common to the States was desirable. The address given at the second interstate assembly by the president of the Council of State Governments, former Gov. John G. Winant, of New Hampshire, sets forth succinctly the objectives of the movement:

It has often seemed to me that we might attempt to develop greater coordination and cooperation between the Federal Government, the State governments, and the local governments. It has also occurred to some of us that it might be possible to facilitate contact between the various States of the Union and that, in order to achieve this, it might be helpful for each house of each State legislature to set up a permanent committee on interstate business. Furthermore, we have thought that it might be desirable to set up some kind of regional secretariats in various parts of the country. For example, if such a secretariat were set up in New England, the secretary would make it his business to further cooperation between the States in this group.

2. The New England Council

The New England Council, which was started some 10 years ago, is an example of a useful type of regional organization. Primarily the council was set up as an economic unit, but it has also done a great deal to stimulate governmental cooperation between the New England States. Through it the 6 governors are called together frequently—at least every 6 months, and usually oftener—to discuss problems that affect the people of their States. I would like to mention 1 or 2 specific achievements. It would seem natural that the commissioners of health in such a region as New England would meet frequently. In fact both national and international conferences on health problems are to be found among most civilized nations of the world today. And yet it was not until the New England Council had been formed and had sponsored such a meeting that the commissioners of health of the several New England States ever met.

It was also found that in our section of the country we had failed to establish standards for agricultural commodities, and that consequently commodities from other parts of the United States and from other countries were displacing our own products. Upon the request of the council, the commissioners of agriculture of the New England States met, and formulated a legislative program which was unanimously adopted at the next sessions of the legislatures. The adoption of that program, incidentally, has resulted in an enormously increased consumption of New England products.

These are but two examples of the type of problem which might effectively be attacked by a regional organization of governments. We have a milk problem in New England which affects more than a single State and which might well be settled by a cooperative approach. More than 90 percent of the milk consumed in the Boston area comes from Vermont, New Hampshire, and Maine. Therefore, if we are to stabilize the milk market in those States, it is necessary to work out an interstate arrangement which may possibly be incorporated in a formal interstate compact.

Often transportation problems necessitate cooperation among States. We spent 7 years trying to work out a transportation program for New England through cooperative arrangements, and it is certain that the sectional approach is traceable directly to the New England Council.

3. The Need for Cooperation

All these problems are essentially interstate or regional in scope, and if we plan to stop the increasing trend toward centralization we must in some way provide for the efficient handling of such matters by the States. People turn to the Federal Government for action when, and because, they fail to get satisfactory action by the States.

Too often we think about the Federal Government "encroaching" upon the State government, and the State government "encroaching" upon local governments. As a matter of fact, each of us individually is a citizen of the Federal Government, the State government, and the local government, and there can be no intelligent quarrel within ourselves as to whether we are representing at any given moment the Federal Government or the State government or the local government. We owe a loyalty to each of them, and we expect the rights and privileges that belong to us as citizens of each of them.

Our mistake has been in failing to put sufficient thought on the problem of an intelligent adjustment of the functions of these various levels of government—and "intelligent", in this case especially, connotes an adaptation to the needs of modern times. We are too prone to imagine that a form of government set up more than a century ago will, without any effect on our part, automatically meet all the changes that have taken place in social and economic conditions. We must have some imagination and some initiative ourselves if we are to implement these governments which were established to protect individuals and communities and national life.

All of this has nothing to do with what we call "issues"; it has to do, as I suggested at the beginning, with the mechanics of government. Largely because the subject is both somewhat uninteresting and somewhat complicated, few people have attempted to solve it. However, I want to point out to you that if representative government, if government by the people, ever fails, it will be because that government failed to react efficiently to the wants of the people. There is nothing more dangerous, in my opinion, in a great democracy than a clumsy, incompetent government machine. If you want to hand on to posterity more than debt, if you want to maintain the American ideal of government, it will be necessary to do something about this problem of efficiency and coordination and cooperation, this problem of the mechanics of government.

This movement received the support of President Roosevelt in a letter of February 18, 1935, addressed to Mr. Henry W. Toll, the executive director of the American Legislators' Association, in which he stated:

It is apparent, I think, to all students of government that there is urgent need for better machinery of cooperation between Federal, State, and local governments in many fields. Both the Congress and the executive departments of the National Government are constantly confronted with problems whose solution requires coordinated effort on the part of the States and the Federal Government. Two notable instances are the coordination of law enforcement and the interrelation of fields of taxation. This latter question has long seemed to me one of prime importance. Only recently I directed the Secretary of the Treasury to undertake a study of sources of taxation, with particular reference to the matter of conflict or overlapping of Federal, State, and local taxation. When this study is complete it should furnish the basis for discussion of the problems involved with representatives of the States.

4. Resolution of the Second Interstate Assembly

The program of the Second Interstate Assembly covered many problems of taxation and State-Federal relations. Its resolution concerning continuing interstate cooperation adopted at the Second Assembly reads as follows:

Your committee on agencies for interstate cooperation considers the question of cooperative agencies as one of extreme importance and has drawn up the following resolution which it now presents to the Second Interstate Assembly:

Whereas confusion, competition, and conflicts constantly exist between the States of the Union in their laws and in their administrative practices concerning many subjects of government with which the States are vitally concerned; and

Whereas it is desirable for the people of all the States that such disharmony and chaos shall not continue, but that the governments shall strive together in accordance with enlightened standards and mutually accepted policies; and

Whereas the necessity for official cooperation between the State governments is recognized by the compact provision in section 10 of article I of the Constitution of the United States; and

Whereas there have now been established agencies which provide such machinery of cooperation, namely, the American Legislators' Association, which has been officially sanctioned and endorsed by one or both branches of 46 legislatures, and the Council of State Governments, which has been organized by said association; and

Whereas it is to the interest of the people of each of the States that their government officially participate with the governments of the other States in the formulation of their cooperative policies, and in their other deliberations, in order that the interests of such States may not be disregarded; therefore be it

Resolved, That this Second Interstate Assembly recommends that appropriate agencies on interstate cooperation be formed in each State; and be it further

Resolved, That the executive director of the American Legislators' Association and the Council of State Governments communicate this recommendation to the governor and legislature of each of the several States.

5. Recommendations of the Assembly— Regional Organization

To provide these agencies on interstate cooperation with an effective directing and coordinating agent, your committee strongly recommends the establishment of regional secretariats in the manner which the American Legislators' Association and the Council of State Governments have set forth. The committee reports that such a regional secretariat would promote cooperation between neighboring States with regard to policies and activities relating to such public problems as may arise from time to time and which require uniform or reciprocal action on the part of other States included in the region. It would devolve upon the regional secretary to make a constant study of the possibilities of regional and Nation-wide cooperation between the State governments. Your committee feels that the establishment of such regional secretariats is vital to the development of harmonious State relationships and that such secretariats would prove to be effective agencies for improving interstate cooperation.

Your committee recommends that this meeting of the Second Interstate Assembly formally commend the American Legislators' Association and the Council of State Governments on their recent publication, "The Book of the States." The periodical editions of this book will represent the only compilation in the country of current facts and features pertaining exclusively to State government. Obviously, this publication will facilitate cooperation among the States.

Finally, your committee recommends that, if, and when the American Legislators' Association and the Council of State Governments are requested to render any type of service for such national associations of State administrative officials as the National Association of Secretaries of State and the National Association of Attorneys General, such requests should be granted insofar as the present staff and facilities permit.⁴

There was also recommended the fostering of interstate compacts, as reflected in the following resolutions:

Resolved, That in order to facilitate negotiation, understanding, and harmony of State governments with one another and with the Federal Government, it is the sense of the Second Interstate Assembly that the Congress of the United States should consent to a compact or agreement among any two or more States for the establishment of a Council of State Governments.

6. Recent Developments in Interstate Relations

Within 3 months,⁴ 23 States have already established commissions or committees on interstate cooperation, of which 7 are representative of both the legislative and executive branches of government, the others being joint legislative committees.

One of the significant developments which is full of potential usefulness not only for groups of States, but for Federal authorities, is the establishment by the Council of States of regional offices through which types of cooperation peculiarly adapted to States in the regions will be fostered. Such experiments have already been undertaken with varying degrees of formality in different parts of the country throughout our history; the present movement is significant as giving a conscious and formal recognition to the desirability of this development and in providing continuing staff assistance.

For example, in recent years the Western Motor Vehicle Conference brought together delegates from 11 States and established a continuing organization composed of 3 delegates from each State representing respectively the senate, the house, and the executive branches. The range of problems dealt with by this informal conference included taxation, the licensing of motor vehicles, the limitation of weights and dimensions, and other problems confronted by those administering the highways, including the research

and relations with the United States Bureau of Public Roads.

Recently there was held a Lake States Conservation Conference with representation from Michigan, Minnesota, and Wisconsin, and the various Federal departments, whose program, as indicated by the topics outlined below, illustrates the interdependence of these units of Government and the necessity for cooperative action.

(a) Scope of Conference

To discuss and formulate a forest-conservation program for the Lake States as a component part of national plan for American forestry, this program to be based upon a coordination of Federal, State, and private ownership and management.

(b) Immediate Objectives

(1) To formulate a coordination of unemployment relief activities in forest conservation relating to—

- (a) Acquisition of land for protective and commercial forestry by the Federal, State, and local governments.
- (b) Agreements with private owners for erosion prevention.
- (c) Development of wildlife refuges.
- (d) Principles of land classification and retirement of submarginal agricultural land.
- (e) Forest improvement for protection and silviculture.
- (f) Development of forest farm communities.
- (g) Research.
- (h) Other related projects.

(2) To discuss cooperation of agencies involved:

- (a) Civilian Conservation Corps.
- (b) Public Works Administration.
- (c) Emergency Relief Administration.
- (d) Subsistence Homesteads Division.
- (e) Biological Survey.
- (f) National Park Service.
- (g) Rural Rehabilitation.
- (h) Land Policy Section A. A. A.

(3) To discuss and formulate a coordination of these Federal agencies with State conservation departments, status of joint jurisdiction, localized employment, local governments interests.

(c) Permanent Objectives

(1) To outline a forest conservation program for ultimate sustained yield forestry, forest protection, and recreation, for Federal, State, and private ownerships, involving—

- (a) Future normal requirements for forest industries including lumber, paper, and miscellaneous forest products.
- (b) Future developments of forest products utilization.
- (c) Future requirements for preservation and development of wildlife, wilderness, recreation, and resort areas.
- (d) The development of permanent forest farm communities, classification of land use, and relocation of isolated domicile.

(2) To formulate a program for intensive (commercial) forestry based upon future industrial raw wood requirements, soil, climate, topography, accessibility, and cooperation of ownerships, for determination of specific areas to be devoted to commercial forestry.

⁴ See the issue of State Government for August 1935, for a review of developments.

(3) To discuss forestry legislation:

- (a) Review of current legislation in forest conservation in Michigan, Wisconsin, and Minnesota, and Federal legislation relating to Federal acquisition of land for State forest, national forests, and the development of forestry code in the revision of the N. R. A. and regulation of private forest management.
- (b) Recommendations for legislation relating to delinquent tax lands, forest taxation, land exchange, revision of local governments, etc.

A regional meeting of State attorneys general was held in Hartford, Conn., on May 15 and 16, 1935, at the invitation of E. L. Averill, president of the National Association of Attorneys General to consider "the immediate future of interstate compacts and administrative agreements among their respective States."⁵ In the course of his discussion of the topic, Attorney General Averill stated that—

Each of the States represented at this meeting has enacted one or more uniform laws dealing with problems of State government, thus effectuating cooperation between the States without impairing State sovereignty. Each of these States has enacted reciprocal legislation which facilitates interstate cooperation without impairing State sovereignty. Each has entered into interstate agreements which simplify intercommunication without impairing State sovereignty. Finally, each of these States is a party to interstate compacts, and most of them are negotiating more compacts. These compacts protect the interests of both the State and Federal Governments and constitute the highest form of cooperation. A vast field of activity is open to these several means of cooperation. It includes criminal law and administration, pollution of streams, water rights, taxation, motor-vehicle regulation, public utilities, sale of securities, highways, control of intoxicating liquor, public health, insurance, banking, milk regulation, and many other functions of government.⁶

⁵ State government, August 1935, p. 164.

⁶ See also *Uniform State Action*, by W. B. Graves, University of North Carolina Press, 1934.

At a meeting of the planning board of the Council of State Governments with the chairmen of the State committees and commissions on interstate cooperation held in Chicago on June 15 to 17, 1935, during the discussion of the movement generally the importance of developing regional secretariats was emphasized. It is interesting to note that there was clear recognition of the "variety of items with which a regional secretariat might be concerned" which would therefore "involve different combinations of States"; consequently any regional grouping would have to be loosely formed.

7. Organizations of Public Officials and Government Cooperation

We should not overlook in this connection the importance of the organizations of public officials of State and local governments, who are increasingly establishing permanent central staffs for the furtherance of higher standards of public administration and cooperative action throughout all units of government generally. These organizations such as the National Association of Railroad and Utilities Commissioners and similar organizations of officials in public health, highway, labor, law, and many other services, frequently work in close relation with Federal bureaus concerned with problems common to the National, State, and local governments. We can thus see emerging a much more varied and flexible system of governmental relations than has ordinarily been envisaged by those who see American political questions in terms of the traditional alternative of State or Federal government. The rise of this formal and organized effort to enhance the effectiveness of State and local government through the provision of cooperative services is one of great importance and potential usefulness to national planning staff officials.

CHAPTER V. FEDERAL DEPARTMENTAL EXPERIENCE

Nowhere does the problem of regions emerge more persistently than in the activities of the Federal Government itself. Indeed, so commonly used is the regional approach in the activities of the Federal departments, bureaus, and special agencies, that it may be regarded as one of the characteristic traits of the national government. Despite this, the regional problem does not here emerge as a clear-cut one; the causes are not sharply revealed, and the attempts at solution do not always seem to be convincingly valid.

1. Territorial Definition of Jurisdiction

As pointed out in Section 2 of Part I, the central problem of the administrative structure of government is perhaps that of the definition of jurisdictions. So far in the United States, nearly all attention has been centered upon questions pertaining to the definition and allocation of function among the bureaus and departments, and more recently among the special independent agencies. At the same time, the almost equally important questions relating to the definition and allocation of territory within these administrative units, have been either overlooked or dealt with in rather casual fashion.

It is conceivable that in a very small country, a purely functional division of authority and operation might be most advantageous, but in a nation as large as the United States, it is well-nigh impossible to administer any given function for the country as a whole. Consequently, functional operations must usually be given direction by relating them to specific areas—or as commonly expressed—"carrying them out upon a regional basis." For example a Federal employee cannot be sent outside the District of Columbia, be told that his duty is to inspect grain elevators in the United States, and still be expected to perform his assigned function either efficiently or intelligently. He would be mounting his horse and riding in all directions at once, owing to the lack of a defined area within which to operate. The fact that 20 or 50 men, instead of 1, might be thus directed to perform this duty, does not clarify the situation; it further muddles it. A great number of Federal administrative agencies have, therefore, found it necessary to set up field offices with definitely demarcated areas of jurisdiction.

This is but one example, selected at random, of the need for regionalizing the administrative activities emanating from the National Capital. There are

within the Federal Government several score of bureaus and special agencies which carry on many hundreds of clearly defined tasks, each of which involve problems comparable to the example cited above. Assigned to perform these is a very large personnel of men and women in Federal employ. With more than 80 percent of this personnel stationed outside the District of Columbia, it has become practically imperative that each governmental organization define territorially the jurisdiction of its field agents and to establish numerous offices in cities other than Washington. (See fig. 4.)

2. The Use of State Areas for Federal Administration

Federal agencies have recognized the necessity for the regionalization of their activities rather fully, and as a consequence more than 70 of them have established regional schemes. Several bureaus employ two or more different regional arrangements, depending upon the functions with which it has to deal. All told, therefore, the number of schemes now in use totals approximately 108. (See Appendix, figs. 30 to 47.)

The States themselves constitute ready-made regional units which one might suppose would be adaptable to the purposes of Federal field administration. There are, indeed, several agencies which do use the areas of the States as their administrative divisions, but most of them have evolved other sorts of areal units for this purpose.

The States, in addition to providing units of sub-national sovereignty, may have originally been intended to fill the need of field divisions for Federal administration, but they do not seem to meet the requirements for such use today. They are generally too small to serve as Federal administrative regions, and too large to serve as subregions or districts. Moreover, they are not uniform in size: the disparity in areal magnitude between Texas and Rhode Island, California and Delaware, or Montana and Connecticut is illustrative of their unsuitability from this standpoint. Lastly, the areas of the States do not, in many instances, bear any relation to the functions or objects which are being administered. As a consequence, the majority of Federal agencies have delineated regional boundaries which transect those of the forty-eight States.

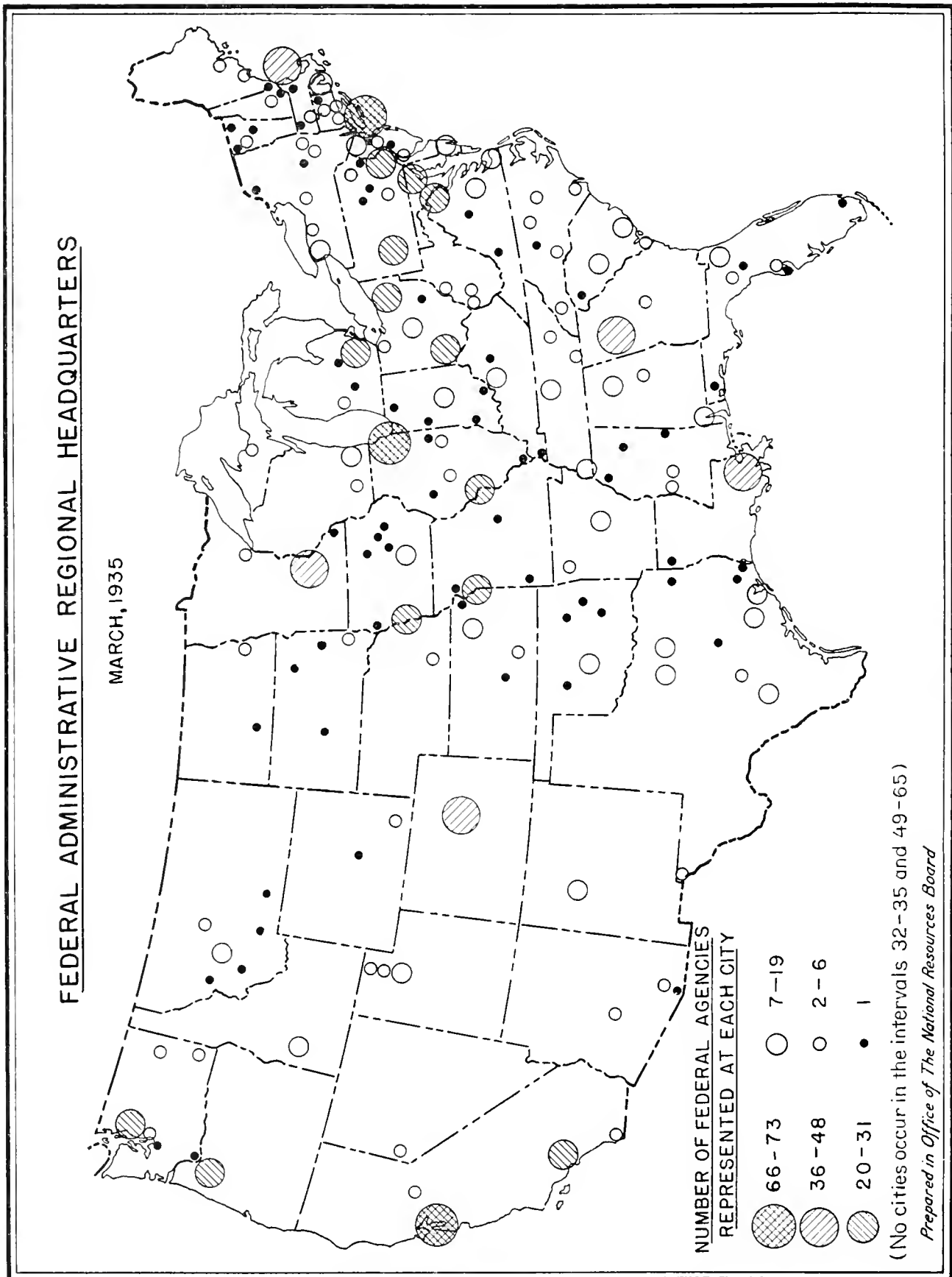


FIGURE 4.

3. Regional Needs in Federal Administration

The regional problem as it impinges upon Federal activity is really twofold. First, there are needed divisions of the country suitable for the carrying out, in the field, of administrative control from Washington. Second, subnational units of area are needed in order to accomplish actual decentralization of powers and activities of the Federal agencies, particularly where planning and policy making are involved.

The first phase of the problem has been met by designing many different regional systems, wherein the individual regions are usually larger than a State and more nearly uniform in size than are the States. The second phase of the problem has been met, at least in a few instances, by devising systems of regions wherein each areal unit is more closely related to the function or object dealt with, than are the States or even the general run of Federal administrative regions.

4. The Incidence of the Regional Problem in Administration

The bureaus of the Federal departments have in most instances adopted regions simply to effect greater efficiency and convenience in administering their activities in the field. The significance of Federal regions, however, transcends mere considerations of efficiency and economy in administration. The whole issue of regionalism is involved, or at least implied, and this is increasingly being raised by students of polity, geography, and social science. These students have demonstrated that most internal political boundaries exhibit slight conformity to natural physical areas, or to the social, economic, and political problems which are closely related to such areas. They have demonstrated further that such things as literacy, crime, birth rates, urbanization of population, differentiation in agricultural production, problems of reclamation or reforestation, are definitely regional in character and occurrence. It is fairly obvious, therefore, that these can be treated most effectively, not by direct handling from Washington, but by a regional approach.

Few of the bureaus of the Federal departments have gone very far toward decentralization, although some progress has been made within recent years, particularly in the United States Department of Agriculture. Some of the newer organizations have, on the contrary, gone quite far in decentralizing Federal activities, as for example, the Federal Reserve System, the Home Owners' Loan Corporation, the Tennessee Valley Authority, or the Farm Credit Administration.

In the case of the last named, decentralization has proceeded to the point where, for example, all personnel problems arising, or applications for employment received in Washington, are referred to the regional offices for handling. This represents more than a blind movement toward decentralization; it is a direct attempt to meet regional sentiments and needs.

5. Analysis Needed

The problem of regionalism has long been a persistent one in Federal departmental administration. Moreover, every evidence suggests that it will assume increasing importance in the future. So far, the problem has been met by each Bureau separately without consideration of the total situation. No systematic analysis has been made of total prior Federal experience in the matter, and consequently the general needs and principles involved have not been known. Each case, as it has arisen, has constituted a situation "de novo", and has had to be attacked empirically. The result has been several score of unlike solutions.

There is clearly needed a careful study and analysis of Federal departmental procedure, with the aim of discovering what practices have been followed, what principles seem to be involved, what are the needs and possibilities of reform, and in what ways the usefulness of the regional concept can be extended. Chapter VIII of part III of this report sets forth the results of a preliminary survey of this problem, but considerably more study is required to make the picture complete or the conclusions entirely convincing.

PART III

SOME ATTEMPTS AT SOLUTION OF THE PROBLEM

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CHAPTER VI. THE INTERSTATE COMPACT

1. The Constitutional Basis

The Constitution of the United States as drafted in 1787 represented a bold and original effort to create a political system in which the cumulative advantages of a large national state could be combined with free opportunity for political development and expression through the autonomy of member States. That these member States were conscious and jealous of their individual personalities and interests is amply demonstrated, not only by colonial history but also by that of the confederation. The origins of their establishment, the differences in their relationship with the mother country, and the development of separate centers affected by somewhat different environments and separated by difficulties of travel had combined to produce a reluctance to enter into even such limited forms of confederation as were proposed, for example, by Benjamin Franklin before the Revolutionary War. At the time when the constitutional convention was meeting in Philadelphia there existed a powerful body of opinion throughout the States, unfriendly to the establishment of a strong central government. The Constitution is therefore a kind of contract among the States whereby specified and limited functions are delegated to the United States of America by the assignment of certain powers and duties to the Congress, President, and Supreme Court. The very article I in which powers are conferred upon Congress also contains in section 10 statement of restrictions upon the exercise of these powers, partly in the interest of the separate States. Even this would not serve to allay opposition on the part of those who were fearful of centralization; and further reservations were attached in the form of articles I to X in amendment to the original Constitution. Here again it may be noted that under the last of these early amendments (article X) "The powers not delegated to the United States by the Constitution, nor prohibited by it to the States, are reserved to the States respectively, or to the people."

In article I of the Constitution, in which powers are conferred upon Congress as well as specific restrictions placed upon its action under section 10, restrictions are also placed upon the action of the States. It is interesting that among these restrictions is the following: "No State shall, without the consent of Congress, lay any duty of tonnage, keep troops or ships of war in time of peace, enter into any agreement or com-

pact with another State, or with a foreign power, or engage in war unless actually invaded, or in such imminent danger as will not admit of delay."

It has been assumed that this subsection 3 of section 10 of article I should be interpreted as actually permitting agreements or compacts among the States with the consent of Congress. Thus in addition to a division of powers between the new National Government and the States, the Constitution by indirection suggests the possible creation of a unit of government by interstate agreement.

2. Challenges to the Federal System

Those who are at all familiar with the history of the United States, appreciate the fact that this effort to balance and adjust the governmental interests of the whole, as against those of a particular part, has undergone various and weighty changes. A long line of episodes, including those marked by the alien and sedition laws, the Hartford Convention, the struggles over internal improvements, opposition to the tariffs, the controversy over railroad routes to the Pacific, the Civil War itself, the disputes over land policies in the West—show a few of the more dramatic instances of the use of the two different levels of government, in opposition to one another, as a means of protecting and advancing particular policies and interests. Indeed, the doctrines of Calhoun, perhaps the most outstanding of the proponents of State rights, have been studied carefully in other federal states, such as Germany, as among the most fundamental analyses of this difficult problem of political organization.

The very fact that such controversies have been so dramatic and have been expressed through the careers of outstanding leaders in sections and Nation, as well as the disproportionate attention which has been paid to legal aspects of constitutional development in this country, have tended to blind us to the fact that we are not presented here with a simple alternative between the use of the Federal Government or the use of the State government for the maintenance of public services. There are interests and problems that do not coincide nicely either with the national boundaries or with State lines. Such interests may be badly served or not served at all by the ordinary channels of National or State political action. Such problems may not get recognized or attacked, and hence may have an un-

fortunate effect upon national development. Even a brief survey of the history of interstate action of any kind, or of Federal concern for problems peculiar to a region within the national area and yet inclusive of more than one State, brings out the fact that there have already come into existence administrative arrangements of different kinds designed to express and deal with needs peculiar to a region that fall between the ordinary action of the National or of the State governments.

a. More Rapid Communication

The inadequacy of a single State to solve certain problems peculiar to it or to local governments within it despite the fact that the residual powers of government were left to the States under the Constitution is due first of all to the increasing ease and rapidity of communication. This changes the time necessary to cover a given space and therefore compresses the earth's surface and brings the people within a given space into much more frequent contact. A very few concrete examples will illustrate the point. Very recently the effort to regulate milk distribution in New York City by means of legislation passed in New York State broke down because the Supreme Court held such an interference with those providing milk for New York City from other States was unconstitutional. A complete lack of regulation would, however, throw the entire milkshed which includes parts of several states into great disorder and confusion to the disadvantages of all those concerned. It is therefore proposed at the present time that representatives of the States in which the milkshed lies negotiate an interstate agreement to provide this regulation. Obviously in a period in which communication would be slow and difficult, the milkshed will be very different from one in which by reason of fast rail transportation and with methods of car refrigeration the distributor may obtain fresh milk from a distance of hundreds of miles and bring it safely to the city consumer. Again, rapidity of communication which has come with the paved highway, the automobile, and more recently the airplane, has made the detection and apprehension of criminals far more difficult. The increase in mobility in general, in fact, has the effect of making neighborhoods less stable and acquainted with themselves and changes the whole setting of public order and the maintenance of public standards.

b. Pressure of Population on Resources

Closely related to these challenges raised by changes in time-space relationships due to means of communication is that raised by the increasing pressure of growing populations upon natural resources. Thus as New York City and Los Angeles increase in population

they must go farther afield for their water supply and hence may tap the river systems that are of vital concern to other States. The disposal of the wastes of a growing city like Chicago or of cities adjacent to Chicago may lead to administrative and legal problems not only of a local metropolitan area, not only of interstate adjustment, but even, as we know, of international concern. The city dwellers of the great industrial centers of southern New England and New York have a vital interest in the forest and interval regions to the north as increasing metropolitan development makes the preservation of a recreation area essential for a proper balance of human living. The blocking up of areas sufficiently large to maintain permanent wood-using industries in the Lake States cut-over region requires comprehensive interstate and Federal cooperation, as we have seen. The maintenance of forest resources by a single State might not in itself be enough to guarantee a sufficient permanent supply of timber on a selective cutting basis to warrant the location of the kind of industries that would be desirable.

c. Economies and Services from Interstate Cooperation

There is a third basis for such cooperation in government as falls between the national and the State levels which is only recently being discerned. It is possible through the joint effort of certain States that valuable public services that actually make for greater economy for the individual citizen and business enterprises can come into existence. Thus the provision of port facilities in and about New York Harbor, of recreational areas accessible easily to the great urban agglomeration of metropolitan New York, of bridges over the Delaware River or Lake Champlain actually add to those with interests in these localities more than they subtract by reason of the charges necessary for financing these enterprises. Indeed, certain of these services could not come into existence at all without such cooperative action. Those who founded the great metropolitan water, sewerage, transit, and park systems of Boston taught this lesson when they showed how the former anarchy that existed among the 40 or more political communities of that region was resulting in the destruction through neglect and unplanned development of many resources and services that would determine the desirability and future growth of the whole area. There is a final suggestion to be made in this connection, which is that further administrative experiment and invention may enable us to secure more adequate public services at lower costs through an extension of such interstate cooperation. As students of administration come to be more clearly aware of the minimum tax base, population and size of area

required for the best public services, we may find that it is desirable to establish for a group of States a single system of hospitals, institutions of higher learning, and other public services in which the quality of service is partly dependent on having a sufficiently numerous group to warrant classified and specialized services. Similarly certain metropolitan areas, like Greater New York and metropolitan Chicago, which lie within more than one State may find economies in the wider sense of the term in the use of joint instruments.

3. Can the Federal System Meet These Challenges

There are those students of government—and they are numerous today—who predict the decline in the importance of our State governments. Perhaps they forget how deeply embedded our States are in the constitutional system, and how powerful is the canalizing of political leadership and civic careers through their channels. The States are often attacked on the ground that their boundary lines are entirely illogical. Any effort to redraw these lines has much of the difficulty that confronts those who attempt to revise the treaty of Versailles in order to have a strict coincidence of political with geographic and cultural boundaries. The fact is that far more can be arranged flexibly under the American constitutional system with its possibilities of grants in aid and interstate cooperation than the average person realizes. It is all the more important, therefore, that the administrative staffs of national planning authorities be alert to detect such possibilities in the planning regions in which they operate.

We have referred to the provision in article I, section 8, of the Constitution of the United States by means of which States are enabled, subject generally to the approval of Congress, to enter into compacts or agreements. The increasing contemporary interest in the use of the interstate compact as a means of dealing with regional problems that require the cooperative action of two or more States is reflected in the numerous articles that have been published in legal and other periodicals and the daily press within the past 15 years, and the more extended special studies and analysis of Federal-State relations now in course of preparation by Dr. Jane Perry Clark. The water planning committee of the National Resources Board has analyzed the utilization of the compact in relation to water uses, and the Oil Conservation Board has similarly studied the compact device for use in regulation of the oil industry. Legislation permitting an interstate compact to govern the production of oil has just been enacted by Congress, while other uses of this device, including labor legislation, taxation, crime pre-

vention, and the regulation of milk distribution within a given milkshed have been inaugurated or proposed. Hence a brief survey of the use of the compact may serve to illustrate the shift of emphasis which has taken place. Used earlier chiefly as an alternative to litigation before the Supreme Court (provided for in article III of the Constitution of the United States) and hence of limited application, more recently the compacts and proposals for them reflect the emphasis on a positive provision for continuing and flexible adjustment of public services to needs that cannot be adequately met or dealt with at all by ordinary State or Federal action.

4. The Use of Interstate Compacts

However, according to the records compiled by the Library of Congress, 57 compacts have been authorized, of which 34 have finally become effective through State ratification. In addition, 13 compacts have been authorized by one or more States without congressional authority and approval.¹

According to the classification of Messrs. Frankfurter and Landis, the interstate compact has been used to deal with eight situations, namely, boundaries and cessions of territory, criminal jurisdiction over boundary waters, uniformity of legislation, interstate accounting, taxation, utility regulation, control and improvement of navigable streams, and the conservation of natural resources.² Of the 44 compacts to which Congress has given approval since 1900, 30 have been effectuated within the period since 1918. Within recent years the compact method has been used, particularly in the fields of law enforcement and labor standards.

(a) *Boundary disputes and the cession of territory.*—The earliest and most frequent use of the compact has been to settle boundary disputes and to cede territory. A boundary dispute may be designated as political in nature, best solved by joint fact-finding, and usually after much compromise; resort to litigation before the Supreme Court has in consequence generally proved less adequate than settlement through compact.

Sometimes the Supreme Court itself, feeling itself powerless, has recommended solution through interstate treaty of boundary disputes. In the case of *Washington v. Oregon* (211 U. S. 273–283), a peculiar situation presented itself: The boundary line between the two States had been set at their admission into the Union as the center of the North Channel of the Columbia River (subject to changes by accretion), but now the South Channel had become more important for pur-

¹ Northcutt Ely, *Oil Conservation Through Interstate Agreement* (Washington, Government Printing Office, 1933), p. 266. For a list and short description of these compacts see pp. 357–393.

² F. Frankfurter and J. M. Landis, *The Compact Clause of the Constitution*, Yale Law Journal, XXXIV (1925), 695–696.

poses of navigation. The Court here felt itself powerless to change the boundary line as originally set despite the fact that the South Channel had become more important, but for the purpose of social justice urged the States to redraw their boundaries by interstate compact. But even if the Court had had the power to act, the use of the compact would probably have led to more effective settlement on the basis of "compromised fact findings."

(b) *Interstate debt settlement.*—This type of interstate adjustment has been necessary only once: When West Virginia was partitioned off from Virginia. The problem was how much of Virginia's public debt to devolve upon the new State of West Virginia, and agreement was reached by compact. However, many years of litigation followed to establish the exact amount of West Virginia's obligation.

(c) *Prevention of crime.*—On June 22, 1910, Congress passed the following statute:

Resolved by the Senate and House of Representatives of the United States of America in Congress assembled, That the consent of the Congress of the United States is hereby given to the States of Wisconsin, Illinois, Indiana, and Michigan, or any two of them, by such agreement or compact as they may deem desirable or necessary or otherwise, not in conflict with the Constitution of the United States or any law thereof, to determine and settle the jurisdiction to be exercised by said States, respectively, over offenses arising out of the violation of the laws of any of said States upon the waters of Lake Michigan (36 Stat. L., 882).

On June 6, 1934, Congress attempted to promote interstate cooperation against crime by the following resolution:

Be it enacted by the Senate and the House of Representatives of the United States of America in Congress assembled, That the consent of Congress is hereby given to any two or more States to enter into agreements or compacts for cooperative effort and mutual assistance in the prevention of crime and in the enforcement of their respective criminal laws and policies, and to establish such agencies, joint or otherwise, as they may deem desirable for making effective such agreements and compacts (48 Stat. L., 908 ch. 406).

Senator Royal S. Copeland explained the need for such compacts: "One of the chief necessities of the present situation is to devise a method of apprehending witnesses who flee across State lines. The bill deals specifically with this situation, but it would go much further. It recognizes the fact that the almost universal use of automobiles, airplanes, and other means of rapid transportation has greatly increased the difficulty of enforcing criminal laws, and it authorizes interstate agreements to cope with the general problems which arise in this situation."³

³"Defensive Alliances. Interstate Compacts for Cooperative Efforts Against Crime", in *State government* (May 1934).

(d) *Taxation.*—One use of the compact has been to avoid litigation over the taxation of common resources. Frankfurter and Landis have made the following observation: "The taxing power is the most jealous power of government; it is also least amenable to the scientific process. Nevertheless no one can scan the flood of cases dealing with 'jurisdiction' to tax, rules for apportionment and the like, without realizing that the opportunities for taxation open to the States against common resources might find a more economic and more effective solution through negotiation than through litigation. At all events, in view of the growing burden upon time and feelings, as well as the cost in money due to the conflicts and confusion arising from the administration of independent systems of State taxation, the possibilities of amelioration and economy realizable through an alert use of the compact clause calls for more intensive study, as part of a disciplined attack upon the entire tax problem."⁴

An interesting illustration of this use of the compact to solve the problem of the taxation of common resources is seen in the Federal statute authorizing the Kansas waterworks agreement of 1922. A portion of this statute (42 Stat. L., 1057) reads as follows:

(1) Neither the State of Kansas, nor any county, township, or municipality thereof, shall ever assess, levy, or collect any taxes, assessments, or imposts of any kind or character whatsoever on the portion of the waterworks plant of the municipality of Kansas City, Mo., now or hereafter located within the territory of the State of Kansas. (2) Neither the State of Missouri, nor any county, township, or municipality located within said State, or any official thereof, shall ever assess, levy, or collect any taxes, assessments, or imposts of any kind or character whatsoever on the portion of the waterworks plant of the municipality of Kansas City, Kans., now or hereafter located within the territory of the State of Missouri.

A suggested use of the compact in the field of taxation is to eliminate duplication. It is significant that the Interstate Commission on Conflicting Taxation is now working on four expedients to eliminate duplication and that 1 of these 4 expedients is uniform and reciprocal legislation and intergovernmental agreements covering various kinds of fiscal conflicts.

(e) *Utility regulation.*—Despite the fact that under the Constitution the Federal Government has the power to regulate interstate commerce, the States have been able to enter into compacts for the regulation of certain interstate utilities:

Apart from the railroads, however, there is still left a wide and vital sphere of interstate communications which project beyond State lines but are nevertheless predominantly regional rather than national in their penetration. Congress has left a

⁴The Compact Clause: A Study in Interstate Adjustments in *Yale Law Review* (May 1925).

considerable part of this field unregulated just because it is essentially local or regional in its significance and because the burden of national oversight would be excessive and ineffective. Again we find resort to compact. Early in our history such action was resorted to for the building of a canal between Virginia, Maryland, and the District of Columbia, and incidentally affecting Pennsylvania. A recent analogue of this method enabled New York and New Jersey to secure underwater communication through the Hudson tunnels. Throughout the country local utilities cross State lines and raise irritating difficulties over regulation. State compact furnishes an effective answer. Kansas and Missouri have drawn on it to master such a situation.⁵

(f) *Uniform legislation.*—For many years States desirous of improving industrial conditions through the enactment of safety regulations, minimum wages, and social legislation in general, have been faced with the danger of thereby losing some of their industries to States without such laws.

During the twenties, both in Canada and in the United States (through the Dominion-Provincial Commission on Uniform Labor Laws and the National Commissioners on Uniform State Laws in the United States, respectively) national conferences on this question were held. Two attempts at uniform legislation were made: A statute of the State of Oregon providing for an 8-hour day in the lumbering industry effective when other States passed similar legislation; and a statute of the Province of British Columbia providing for an 8-hour day in the general industry if the other provinces followed with similar legislation.

But could the goal of uniform State action in the field of industry and labor be secured and maintained merely through this type of reciprocal statute, i. e., one which presents a general mandate such as the minimum wage but does not provide for interstate determination of the minimum wages? Uniform State action in the field of labor and industry must provide for some interstate joint agency or the equivalent to translate the general legislative mandate into specific administrative regulations. A special committee which reported in 1921 to the National Commissioners in Uniform Laws in the United States expressed the belief that the interstate compact is the best device for interstate difficulties implemented through a joint, continuous agency.

Representatives of seven northeastern States met on May 27, 1934, and signed the first interstate labor compact under the Constitution (Connecticut, New York, Maine, Rhode Island, New Hampshire, Massachusetts, and Pennsylvania). The compact provides for a continuing commission in each State and also a permanent interstate commission. The chairman of each State commission is the delegate from his State on

the interstate commission (where the Federal Government is also represented) to which matters of common concern are referred. This permanent interstate agency has functions relating to (1) questions arising "on the part of one or more States ratifying this compact, concerning a matter involved in said compact or in any State law adopted in pursuance thereof"; (2) petitions for revision and renewal of the compact; (3) petitions for withdrawal. In each case it is authorized to make findings of fact and to submit a report with recommendations to the signatory States. In addition it must prepare an annual report on its activities and it must receive periodic reports from the State agencies administering the compact and the laws relating thereto. Although the determination of the minimum wage provided for under this compact is left to wage boards set up by the permanent State commissions, there is the significant provision that "Should any question arise on the part of one or more of the States ratifying this compact, concerning a matter involved in said compact or in any State law adopted in pursuance thereof, then such question shall be brought before the said interstate commission for consideration." This provision would seem to defeat in advance any attempts of the signatory States to neglect the minimum-wage provision, but it must be remembered that the recommendations of the permanent interstate agency are recommendations only.

More recently the activities of the Federal Government in industry under the National Industrial Recovery Act have been important in setting labor standards. But for three reasons the attention of the States with more advanced standards turns on the compact idea: (1) The constitutionality of the National Industrial Recovery Act with regard to intrastate industry was long uncertain and has recently been denied by the Supreme Court; (2) provisions for such objects as the maintenance of industrial health and safety, intended as later goals of the seven northeastern States in their compact, might not be included in national codes; (3) the interstate agency set up under a compact relieves the strain on Washington.

A conference on interstate labor compacts was held at Spring Lake, N. J., on June 28 and 29, 1935, at which the possible application of the compact in the field of labor law was discussed. Sixteen States were represented; the New England States with the neighboring industrial States to the west having secured some representation from Southern States in which recent growth in the textile industry has been marked. Ratification of minimum-wage and child-labor compacts was recommended to the States, while the hours-

⁵ Frankfurter and Landis, cited.

of-labor compact was reserved for further consideration.

The use of the compact for extending the adoption of labor standards was given marked stimulus by the Schechter decision; although the action of the New England States had long preceded this, the same basic cause for the movement there was also operative—the desire to establish minimum standards in order to prevent industrial competition taking the form of reducing wages and increasing hours of work. There are weighty reasons, however, for opposition to the movement. Both sides of the debate are well represented in editorial statements which appeared within a few days of each other in the *Springfield Republican*, and the *New York Herald Tribune*.

The latter newspaper stated in an editorial entitled "Progress Within Constitutional Limits", published on June 29, that—

A highly promising movement is rapidly approaching maturity to accomplish through interstate compacts much that N. R. A. attempted through Federal fiat. Already we have had the Interstate Labor Conference in Washington, to which 15 States sent delegates, with its proposal that the States adopt uniform labor standards. Yesterday a bigger and better conference of the sort opened its sessions at Spring Lake, N. J., to continue and carry further the negotiations initiated at the earlier meeting. This time more than 25 States have representatives present and three definite compacts have come up for consideration, one of them already approved and subject to ratification by Maine, New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, and Pennsylvania.

It is the minimum-wage compact which sets up an administrative agency in each State with authority to investigate the wages of women and minors, to determine fair minimum rates, and to order their establishment. It provides also for a commission in each State to deal with the other ratifying States concerning questions arising under the compact and for an interstate commission to compose their difference.

This may sound like a modest approach to wage regulation. But a modest approach is better than one that overreaches. Of a bolder nature are the other two compacts to be presented to the conference. One specifically forbids the employment of children under 16 and the other establishes a 40-hour week for all industrial labor. Certainly their serious consideration in a gathering of the sort is significant of the progress being made to consolidate by constitutional means those gains from the N. I. R. A. experiment about which there is little dispute.

Interstate compacts are nothing new. The Constitution recognizes them by requiring that they shall have the consent of Congress. They, or their equivalents, were entered into by the colonists before the Revolution. They multiplied after the Revolution in settlement of boundary disputes and to cover agreements over water rights. In our own time we have become familiar with them from such outstanding examples as the treaty creating the Port of New York Authority, the Santa Fe compact, which cleared the way for Boulder Dam, and the tri-State agreement concerning the Delaware Watershed. Today they are being enacted or proposed in one form or another to deal with the problems presented by tax conflicts, tax evasion, liquor control, motor-vehicle regulation, criminal law, and

criminal extradition, milk prices, water pollution, and other objects of legislation which cry aloud for coordinated treatment by the several States.

There is every reason to explore their possibilities in the field of industrial legislation. The machinery for the purpose is already fairly ample. Seven States now have interstate compacts commissions and 17 more have standing committees with authority to negotiate such instruments. All 48 are to be represented in the Council of State Governments as they now are in the American Legislators' Association, with the main objective that of interstate cooperation. Both Congress and the administration are sympathetic. The outlook seems bright for a solution of the problem left on the national doorstep by the N. R. A. decision which shall preserve the basic principles of the American system.

The *Springfield Republican* addressed itself to the subject in the following editorial on the Spring Lake Conference on July 8:

The development of New Jersey as a sweatshop State has been accelerated during the depression, as numerous New York City industries have crossed the State line to avoid the more stringent labor laws. The interstate conference on labor compacts at Spring Lake, N. J., on Friday and Saturday, ran into this fact head on. Governor Hoffman in his address of welcome deplored any "precipitate action"; and then the secretary of the New Jersey Manufacturers' Association sought to discourage the work of the conference by writing that it was "neither sound, wise, nor practicable to attempt by interstate compacts to eliminate or successively overcome widely variant fundamental conditions of industry and labor."

New Jersey's attitude is definitely obstructionist, although the compacts that are most advanced in the stage of negotiations cover only child labor and minimum wages. The proposed minimum-wage compact applies only to women, adult men being excluded under decisions of the United States Supreme Court on the ground that minimum-wage laws for men invaded their right to freedom of contract. Here is an essential difference between the N. R. A. and interstate compacts in practice.

The child-labor compact was signed at the Spring Lake conference by the representative of Connecticut, but other delegates declined to sign on the ground, in some cases, that they must first report to their State Governors or legislatures. The compact regulating hours of labor proved so controversial that not even a favorable committee report was possible and the question was left with the committee to study until the next conference.

The absence from the conference of representatives of the Southern States, except North Carolina, revealed again a long-standing obstacle to a regional interstate pact covering labor conditions in industry. The cotton-textile industry cannot be safeguarded against internal competition of a cut-throat nature unless South Carolina, Georgia, and even Texas adhere to the compact. But progress is made still slower when a northern State like New Jersey, for selfish reasons, gets in the way.

Regional interstate compacts to eliminate "unfair" trade and labor practices in industry are sound in theory. There are industrial problems that pass beyond State lines, yet in their reach are less than national. These may properly be described as regional. For they have outgrown the State system in a territorial sense. Such is the power of the States, however, that no regional compact, such as those discussed at the Spring Lake conference, could be successfully enforced unless in some way the Federal Government could be induced to cooperate.

At the Washington conference last month it was proposed that Congress pass legislation designed to bar from interstate commerce the products of a compact State that were below the compact standards, this Federal protection being only for the States that had passed laws of their own pursuant to interstate compacts.

This proposal was a confession that, in practice, despite the view of the United States Supreme Court, the several States are incapable of solving their regional industrial problems under their own powers, without the intervention of the central Government in enforcement. Participation by the Federal Government, however, under such conditions as would surround regional interstate compacts, to which many States would not be signatories, opens up a wide margin of doubt as to its effectiveness.

Current developments in the movement are reported in *State Government*, the monthly journal of the American Legislators' Association.

The United States Department of Labor has established a Division of Labor Standards whereby co-operation between the National Government and the State governments in the administration of labor standards is facilitated through conferences and the exchange of information.

(g) *Port development*.—In this field has been the most distinctive use of the interstate compact—the agreement by New York and New Jersey creating the Port of New York Authority. A similar plan for a port authority for development in metropolitan Chicago has been proposed.

The harbor of New York comprises that network of rivers, channels, and estuaries where the Long Island Sound and the Hudson River join to form New York Bay and its tributaries. Half of the foreign commerce of the United States passes through it. But the southern and the western shore lines of New York Harbor are parts of New Jersey; the eastern and northern shore lines are parts of New York. For many years this fact of dual political sovereignty prevented the development of the port facilities. In 1835 the States of New York and New Jersey signed an agreement defining the rights of each in these waters, but not providing for a plan to develop the harbor facilities. Such a plan came in 1920 with the ratification by both States of a compact setting up a joint continuous agency—the Port of New York Authority—to execute a comprehensive scheme for the development of the port of New York.

The Port of New York Authority is perhaps the most important regional administrative agency yet developed. It is organized as a self-sustaining public corporation and represents a significant form of devolution in American Government. The central body is a board of commissioners representing both States, with staffs for engineering and other phases of the

planning of the port of New York. Thus the authority has developed a "comprehensive plan" for the port, in which the unification of freight terminals and the simplification of freight movements is outlined. But its constructional and operational program, based upon its financial powers of borrowing and the principle of self-liquidation of its bonds through income from its properties, is of major importance at present. It has built and operates bridges, tunnels, and a freight station.⁶ An important factor which should be noted is the concentration of population in and about the port of New York which assures a steady and large use of the facilities which the authority provides and thereby simplifies the problem of financing such public works from current income, in contrast with the conditions which characterize some areas in which public works to be constructed and operated by interstate agencies are proposed.

Of all the compacts which have been created none has depended upon the planning activity so much as does the one which created the Port of New York Authority. This bi-State agency was set up in 1921 for the purpose of planning and simplifying freight movements in and around New York City. The planning problem with which the port authority has had to deal has been described as follows: "A city awkwardly built on three sides of a couple of rivers with a State line cutting down between them. It means 12 railroads racing toward the heart of the metropolis. * * * It means 44 percent of the dollar volume of American foreign commerce. * * * It means, briefly, freight and traffic waste, reduplication, and delay." And what has been done? A survey published by *Fortune Magazine* in 1933 summarizes the results very well. "To date", this investigator concluded, "11 years after the enactment of this legislation, no part of the plan, with the exception of 15 miles of marginal railway, a very recent railroad lighterage consolidation, and the first union freight station has been realized. The vital tunnel from Brooklyn to New Jersey has not been constructed. The essential belt lines have not been laid. * * * And the old evils of reduplication of function, lost motion, and wasteful railroad competition still survive."⁷

Although the authority has failed to carry out the comprehensive plan, the purpose for which it was created, it has been a success as a business enterprise. Its securities sell at a premium. The result is attributable to the authority's bridge- and tunnel-building activ-

⁶ See the annual reports of the authority; also an article entitled "Borrowing Machines", by Horace A. Davis, *National Municipal Review* (June 1935).

⁷ Port of New York Authority, *Fortune*, September 1933.

ities. Accident played a large part in calling the attention of the authority to the need for the Holland Tunnel, the Bayonne Bridge, and the George Washington Bridge. The necessity for the bridges was discussed by the respective legislatures of New York and New Jersey, but the States did not want to raise their tax rates for the purpose of undertaking these ventures. Some enterprising official thereupon suggested that the port authority be called upon, "and the authority, which, aside from its able defense of the interests of the Port of New York before the I. C. C., was making no headway in its own garden, agreed."⁹

Summarizing, as a planning agency created by an interstate compact, the Port of New York Authority has not been a success. However, as a business enterprise, operating under the corporate form of organization, it has achieved the usual tests of business success. From the standpoint of governmental administration and planning, therefore, the Port of New York Authority is significant because it affords additional evidence of the fact that the Government-owned corporation is an efficient method of carrying on economic enterprises by governments.

When the problem is a continuing and complex one, the compact method is not only ill-adapted to the planning function but it leaves much to be desired from the standpoint of effective administration. It is a well-known fact, applicable to other forms of administration as well as business management, that successful administration requires adequate authority and opportunity for initiative, flexibility, and even experimentation. The more complex the economic or social problem, the more necessary are the last-mentioned administrative attributes. But autonomous administration is far from characteristic of the compact method; it is the principal difference between the compact and the regional development authority represented by the T. V. A.

The Port of New York Authority has been hampered by limitations and insufficient grants of power; it is believed that this result is inevitable in the compact method. As illustrative of the difficulties under which the management must operate, the experience of the Port of New York Authority may again be cited. In that case each of the authority's major construction projects has been authorized by acts of the legislatures, which in some cases even extend to the details of financing. The power of condemnation is not mentioned in the port authority's compact, so it must be granted in all of the statutes authorizing construction. The property of any governmental unit, from State to village, can be taken for purpose of the au-

thority only with the consent of the unit concerned.⁹ The authority is forbidden to pledge the credit of either State without the State's consent.¹⁰ Perhaps the most important of all, the compact reserved the right of each State to enact legislation giving the State Governors authority to veto the official acts of commissioners from their respective States, and legislation putting this power into effect was enacted by both States in 1927.¹¹

Not only does the compact result in circumscribed, strait-jacketed administration, but the problem of compliance is also a serious drawback. When valuable interests such as water rights and transportation facilities are the subject matter of distribution or development, clashes of interest, attempts to forestall, all manner of interferences and obstructions may be expected. This is exactly what has happened in the case of the Port of New York Authority. The blame for the failure of the original plan, the author of the *Fortune* article dealing with the Port of New York Authority has said, "must rest primarily on the refusal of the railroads to cooperate and upon the refusal of the I. C. C. to force the railroads to cooperate * * *." It is quite natural therefore that the Authority "considers without an expression of opinion the possibility that the Federal Coordinator of Railroads may very probably step in and force the New York railroads to do at once what the port authority has been gradually persuading them to do in the matter of pier stations."¹²

Similar interstate agencies, but with more limited scope, are the Delaware River Joint Commission, organized by the States of New Jersey and Pennsylvania, for building and operating a bridge over the Delaware River at Camden-Philadelphia, and the Lake Champlain Bridge Commission, to which the construction and operation of a bridge over Lake Champlain between New York and Vermont was given.

(h) *The use of natural resources.*—Under this general heading may be included (1) the conservation of natural resources such as oil and forests, and (2) the apportionment of the waters of an interstate stream for the purpose of reclaiming arid territory, serving the competing demands of city populations upon common-water supplies, and solving the related problem of sewage disposal. Litigation has been attempted in the latter of these two subdivisions, but it has naturally proved an unwieldy instrument and has resulted in mutilated settlements. The court may be an effective instrument for allotting the water claims of neighbors,

⁹ Art. VI.

¹⁰ Art. VII.

¹¹ Art. XVI; Laws of New Jersey, 1927, ch. 333; Laws of New York, 1927, ch. 700.

¹² *Fortune*, September 1933—*op. cit.*

⁸ *Ibid.*

but when it attempts to apply doctrines of riparian rights to interstate difficulties of this kind the central problem—which is legislative and administrative, rather than judicial—is left untouched. Again the courts have recognized their inadequacy. “We cannot withhold the suggestion, inspired by the consideration of this case, that the grave problem of sewage disposal presented by the large and growing population living on the shores of New York Bay is one more likely to be wisely solved by cooperative study and by conferences and by mutual concession on the part of representatives of the States which are vitally interested than by proceedings in any court however constituted.” (See *New York v. New Jersey*, 256 U. S. 296, 313.)

The use of the compact in interstate water programs has already been surveyed in reports to the National Resources Board, and summarized in the report of December 1, 1934 (pp. 377–381, esp. p. 380). The authors of those reports point out that “interstate compacts are at the moment one of the few means available of attempting the settlement of interstate water problems, but their effectiveness is yet to be demonstrated.” Four such examples, now in operation, are discussed. A major problem arises because of the difficulty of adjusting the powers of the National Government over navigable streams to the conflicting laws of the States concerned, and in the adjustment of the interests and powers of these States, respectively, with each other. Congress has provided for Federal representation on the agencies which have been established to carry out such compacts; but since the task of working out an adjustment of the conflicting interests has been left to the agencies before there has been achieved any substantial prior agreement upon principles or policies to be followed in sufficient detail to eliminate major controversies, there is uncertainty as to the effectiveness of this instrument. The problem of enforcement of the agreements arrived at, present with all such compacts, is particularly difficult in view of the variations in water law among the States, and the uncertainties reflecting court action in interpretation of certain compacts which have been adopted.

The agreements entered into by several States upon which in part the construction of Boulder Dam was undertaken by the United States through the Bureau of Reclamation were not accepted by one of the States, Arizona, with an interest in the disposition of the waters of Colorado River, the subject of the proposed agreement. The legislation finally provided, indeed, that the acceptance by 6 of the States (instead of all 7) would be sufficient to enable the work to be undertaken. Part of the program has been held up by a decision of the Supreme Court following action by

Arizona. Here again the compact has been inadequate as a basis for the planning and development of a natural-resource area in which several States and the Nation as a whole are concerned.

Returning to the subject of conservation of natural resources such as forests and fisheries, one finds that little has been done through the compact. Compacts were early made to preserve minimum standards of protection for fish on boundary waters. But, despite authorization by Congress in the Weeks Act (Mar. 1, 1911, 36 Stat. L. 961) for “each of the several States of the Union to enter into any agreement or compact not in conflict with any law of the United States with any other State or States for the purpose of conserving the forests and water supply of the States entering into such agreement or compact”, no compacts for forest conservation have yet been signed.

Another conservation program is that advanced for oil conservation through the interstate agreement, as outlined in Northcutt Ely’s report to the Oil Conservation Board in 1933.⁵ In the field of oil production there are certain factors preventing a stabilization of the industry. One of these is the doctrine of capture which makes it legal for an oil operator to tap his neighbor’s pools; the only possible redress for the neighbor is offset drilling—in other words, feverish competition for the market and resulting overproduction. Another factor is that of the “flush pool”, which is demoralizing in its effect upon all attempts to effect a balance between supply and demand. The flush pool, wastefully operated, can produce oil for a time at far lower costs of production than the more settled fields; it thus performs the double function of waste and cut-throat competition. Individual States may stabilize their oil industries by proration or the limitation of production, and so avert within their borders the harmful effects of the doctrine of capture and the phenomenon of the flush pool. But, unless an interstate agreement is reached, flush pools from other States can ruin stabilization so secured by independent State action. Here, then, barring the possibility of Federal action, is another field for the interstate compact:

Oil production is a regional problem. The production of all pools within reach of a common market is essentially controlled by a factor common to them all; the unique capacity of a reservoir to discharge flush production for a limited time in quantities out of all proportion to the settled production which follows, at costs which are for a time inversely low and destructive of values of all the settled pools within marketing distance. Self-reduction by one State can no more control the wasteful flush production in another State, despite the effect on their joint market, than it can control the deforestation of a common watershed or prevent the cutting of neighboring timber which will despoil a State park of its usefulness or effect the arrest of fugitives on the far side of the common waterway

or protect its own lowlands by levees in another State or prevent the apportionment of the waters of a common stream or remove drifting obstructions to navigation. State lines have no influence on the physical effect of those regional forces.¹³

Hence there has been proposed a compact setting up an Interstate Oil Compact Board (with representation from the compacting States and to the Federal Government) as the joint continuing agency.¹⁴ This compact, at the time of its submission to Congress by President Roosevelt on August 9, 1935, had already been ratified by Oklahoma, Texas, New Mexico, Kansas, Illinois, and Colorado.¹⁵ It was approved by Congress in the closing days of the session. Since it represents the effort to employ the compact devices in such a way that, in collaboration with the employment of the powers of the Federal Government, the industry may be stabilized, and since it thus offers an interesting comparison with the employment of the N. R. A. code and the new soft coal industry programs, it is here given in a footnote.¹⁶

¹³ Northcutt Ely, *Oil Conservation Through Interstate Agreement* (1935).

¹⁴ See Senate Doc. No. 118, 74th Cong., 1st sess.

¹⁵ *Ibid.*

¹⁶ An interstate compact to conserve oil and gas:

ARTICLE I. This agreement may become effective within any compacting State at any time as prescribed by that State, and shall become effective within those States ratifying it whenever any three of the States of Texas, Oklahoma, California, Kansas, and New Mexico have ratified and Congress has given its consent. Any oil-producing State may become a party hereto as hereinafter provided.

ART. II. The purpose of this compact is to conserve oil and gas by the prevention of physical waste thereof from any cause.

ART. III. Each State bound hereby agrees that within a reasonable time it will enact laws, or if laws have been enacted, then it agrees to continue the same in force, to accomplish within reasonable limits the prevention of—

- (a) The operation of any oil well with an inefficient gas-oil ratio.
- (b) The drowning with water of any stratum capable of producing oil or gas, or both oil and gas, in paying quantities.
- (c) The avoidable escape into the open air or the wasteful burning of gas from a natural-gas well.
- (d) The creation of unnecessary fire hazards.
- (e) The drilling, equipping, locating, spacing, or operating of a well or wells so as to bring about physical waste of oil or gas or loss in the ultimate recovery thereof.
- (f) The inefficient, excessive, or improper use of the reservoir energy in producing any well.

The enumeration of the foregoing subjects shall not limit the scope of the authority of any State.

ART. IV. Each State bound hereby agrees that it will, within a reasonable time, enact statutes, or if such statutes have been enacted, then that it will continue the same in force, providing in effect that oil produced in violation of its valid oil and/or gas conservation statutes or any valid rule, order, or regulation promulgated thereunder, shall be denied access to commerce; and providing for stringent penalties for the waste of either oil or gas.

ART. V. It is not the purpose of this compact to authorize the States joining herein to limit the production of oil or gas for the purpose of stabilizing or fixing the price thereof, or create or perpetuate monopoly, or to promote regimentation, but is limited to the purpose of conserving oil and gas and preventing the avoidable waste thereof within reasonable limitations.

ART. VI. Each State joining herein shall appoint one representative to a commission hereby constituted and designated as the interstate oil compact commission, the duty of which said commission shall be to make inquiry and ascertain from time to time such methods, practices, circumstances, and conditions as may be disclosed for bringing about conservation and the prevention of physical waste of oil and gas,

Some difficult questions are raised by this effort of the producing States to attack the evils of oil and gas wastage because of competitive drilling. Thus the interest of the ultimate consumer is a complex one. He, too, does not desire wastage; nor does he want the fixing of prices and conditions of distribution in such a way as to deprive him either of flexible prices and other benefits of competition or some consultation in the determination of policies. There are also the complicated interests of workers seeking an expansion of employment opportunities in the industry, of competing firms, and of the various communities dependent upon the industry. There remain, finally, the problems of enforcement within a State and among the States.

5. Relation of the National Government to the Interstate Compacts

The role of the Federal Government with regard to interstate compacts has its origins in procedures for the settlement of interstate controversies during the colonial period and under the short-lived Articles of Confederation.

The most characteristic problem for interstate adjustment during the colonial period was the boundary dispute; and it was solved through two different means. One was negotiation and conciliation through joint commissions, with the approval of the Crown required for the final agreement; the other was appeal to the Crown, followed normally by a reference to a Royal commission, with the possibility of appeal to the Privy Council—in other words the avenue of litigation.

and at such intervals as said commission deems beneficial it shall report its findings and recommendations to the several States for adoption or rejection.

The commission shall have power to recommend the coordination of the exercise of the police powers of the several States within their several jurisdictions to promote the maximum ultimate recovery from the petroleum reserves of said States, and to recommend measures for the maximum ultimate recovery of oil and gas. Said commission shall organize and adopt suitable rules and regulations for the conduct of its business.

No action shall be taken by the commission except (1) by the majority of the whole number of the compacting States, represented at any meeting, and (2) by a concurring vote of a majority in interest of the compacting States at said meeting, such interest to be determined as follows: Such vote of each State shall be in the decimal proportion fixed by the ratio of its daily average production during the preceding calendar half-year to the daily average production of the compacting States during said period.

ART. VII. No State by joining herein shall become financially obligated to any other State, nor shall the breach of the terms hereof by any State subject such State to financial responsibility to the other States joining herein.

ART. VIII. This compact shall expire Sept. 1, 1937, but any State joining herein may, upon 60 days' notice, withdraw herefrom.

The representatives of the signatory States have signed this agreement in a single original which shall be deposited in the archives of the Department of State of the United States, and a duly certified copy shall be forwarded to the Governor of each of the signatory States.

This compact shall become effective when ratified and approved as provided in article I. Any oil-producing State may become a party hereto by affixing its signature to a counterpart to be similarly deposited, certified, and ratified.

Done in the city of Dallas, Tex., this 16th day of February 1935.

Under the Articles of Confederation, there was permitted appeal to Congress "in all disputes and differences now subsisting or that hereafter may arise between two or more States concerning boundary jurisdiction or any cause whatever" but there was placed an absolute prohibition upon political combinations by the States, between themselves or with a foreign power. The Constitution of the United States repeats this prohibition of political combinations between the States but provides for interstate adjustment through litigation before the Supreme Court and through the compact clause (which establishes the doctrine of Federal consent for interstate treaties). It is, then, obvious why Federal authorization for compacts has been required: (1) To have Congress perform a necessary function of preventing political combinations threatening to the Union; (2) to have Congress represent the national interest in the consideration of an interstate compact.

One may point out, however, that the courts have ruled that congressional assent is not required for all interstate treaties. Northcutt Ely has summarized the ruling as follows: "We may say that the presumption is that any agreement between two States requires Federal approval, subject to a showing that no Federal interest is involved. The form of the consent, however, is not fixed, and may precede or follow the agreement, and in some cases may be implied; but that as to foreign agreements, while there are few cases, it appears that the requirement of Federal approval will be much more strictly construed."¹⁷

The Federal Government has not been content with a constitutional role of passive approbation. In the case of the Weeks Act and the statute authorizing interstate compacts against crime, we may note that Congress may take the role of stimulator of interstate compacts in a particular field by a general authorization for the States to enter into such agreements. But even in the case of more specific authorizations, as in the statute for the apportionment of the waters of the Columbia River, between Washington, Idaho, Oregon, and Montana, Congress has established the principle of Federal participation in the negotiations.

Be it enacted by the Senate and House of Representatives of the United States of America assembled, That consent of Congress is hereby given to the States of Washington, Idaho, Oregon, and Montana to negotiate and enter into compact or agreement not later than January 1, 1927, providing for an equitable division and apportionment among said States of the water supply of the Columbia River and of the streams tributary thereto, upon conditions that two suitable persons, who should be appointed by the President of the United States, one from the Department of Interior and one from the War

Department, shall participate in said negotiations as the representatives of the United States and shall make report to Congress of the proceedings and of any compact or agreement entered into * * *. (43 U. S. Stat. 1208, ch. 534.)

It is obvious that the intent here was the coordination of Federal and interstate programs. Parallel provisions have been inserted in other water compacts, with representation from the National Government being authorized to participate in the negotiations.

In his useful summary of the use of interstate compacts, published in the "Encyclopedia of the Social Sciences",¹⁸ Dr. Arthur W. Macmahon states: "On the administrative even more than on the judicial side, compacts are likely to draw strength from national infusions. This will be true even if interstate agreements go further than in the past in creating genuinely cohesive, autonomous agencies of regional jurisdiction. The water compacts thus far approved, however, have been little more than guaranties regarding stream flow to guide States in their separate action. The Rio Grande compact approved by Congress on June 17, 1930, is in part an exhortation to the National Government to augment the river by vast engineering works; the interstate committee that it sets up is confined to investigations, without provision that its findings of fact shall not be conclusive in any instance. Embryonic regional organs are many, but the only well-developed examples achieved through compact have been the brilliant accomplishment embodied in the Port of New York Authority (approved 1921-22, 42 Stat. 174, 822) and the application of the same idea for a very restricted purpose in the Lake Champlain Bridge Commission."

Dr. Macmahon's statement raises the question of the part of the national planning staff in the development of programs which may include the use of the interstate compact for purposes of formulation and execution. This place is determined by the powers and responsibilities of the Federal Government in the process of compact making and also in relation to the particular problems dealt with by these instruments. In recent years the Federal Government has through various departments participated in negotiations from which compacts have resulted, notably in the case of the Colorado River compact.¹⁹ Here, although the initiative was taken by an organization entitled "the League of the Southwest" in which seven States participated, which was succeeded by the official Colorado River Commission representative of these States, there was active participation in the negotiations by Federal departments. Such participation is natural and indeed

¹⁸ Volume IV, pp. 109-113, *Compacts, Interstate*.

¹⁹ This is discussed at length in chapter VII.

¹⁷ *Oil Conservation Through Interstate Agreement*, p. 174.

essential where the question under consideration may involve for its solution the exercise of powers delegated to the Federal Government. This is particularly important where the problem involves navigable waters, as illustrated by the development of ports. Here not only are there involved such agencies as the War Department or the Reclamation Service, but in the ancillary provision for adequate and continuous supplies of water for the maintenance of navigation there are also involved the Forest Service, the Soil Erosion Service, and the Federal Power Commission. More recently the development of the compact idea applied to the apprehension of criminals, and the regulation of work conditions through labor legislation has involved participation by the Federal Departments of Justice and of Labor. The declaration by the New England Regional Planning Commission in their vote of April 17, 1935, to recommend the development of New England streams for purposes of flood control, the prevention of pollution, the furtherance of navigation, and general improvement by means of interstate compacts rather than through the establishment of Federal authorities similar to the Tennessee Valley Authority stresses the point that this device "would enable the various States to retain control of any funds expended within the borders of each State and enable each State to put men to work more quickly than would be the case if stream development were to be managed and funds expended by a Federal authority." We should, while recognizing regional responsibility and leadership evidenced by this attitude, note also the fact that even with an interstate compact as a basis for the development of these streams it would still be necessary to secure cooperative action on the part of the War Department, the Forest Service, the Soil Erosion Service, and other Federal agencies in order to realize a comprehensive and well-rounded program. Thus we may conclude that in the first stage of negotiation of a compact it will be highly desirable that the regional representative of the National Resources Committee inform himself and the Committee of the way in which various Federal programs should be integrated with that contemplated by those negotiating the compact.

The participation by Congress may precede or follow the stage of negotiation. There are examples of both types of procedure. There is a tendency to anticipate and indeed invite the use of the compact by the passage of general enabling acts by Congress authorizing compacts for particular purposes. This is well exemplified by a passage in the Weeks Law (Mar. 1, 1911, 36 Stat. L., 961) which reads as follows: "Be it enacted by the Senate and the House of Representatives of the United States of America in Congress assembled, that the con-

sent of the Congress of the United States is hereby given to each of the several States of the Union to enter into any agreement or compact, not in conflict with any law of the United States, with any other State or States, for the purpose of conserving the forests and water supply of the States entering into such agreement or compact."

Similarly the second interstate assembly at its meetings held in Washington on February 28 and March 1 and 2, 1935, passed two resolutions recommending general enabling legislation as follows: "Resolved, that it is the sense of the second interstate assembly that the Congress of the United States should pass a general enabling and consenting act respecting compacts negotiated between two or more States affecting interstate-tax conflicts and not affecting the fiscal interest of the Federal Government."

"Resolved, that in order to facilitate negotiation, understanding, and harmony of State governments with one another and with the Federal Government, it is the sense of the second interstate assembly that the Congress of the United States should consent to a compact or agreement among any two or more States for the establishment of a council of State governments."

Indeed in 1921 Prof. Ernst Freund recommended to the committee on interstate compacts of the commissioners on uniform State laws that they formulate general legislation which would give congressional consent in advance to the negotiation of compacts. The committee, however, held: "The framing of a congressional act giving consent in advance to the formation of State compacts dealing with specific subjects is objectionable on several grounds. The first is that your committee does not know those concrete subjects in which compacts suggest themselves as the desirable arrangement. The compact by its very nature being a regional matter is put beyond the concern of this conference * * * if * * * all that is asked is the framing of legislation on whereby Congress should give its consent to States forming compacts generally upon such matters as river apportionments, harbor regulation, forestry regulation, and the like, such legislation seems objectionable because it requires Congress to give its assent to very indefinite propositions. Such legislation has no practicable value from the standpoint of inducing States to act." (Rept. of the Commissioners on Uniform State Laws, 1931, p. 31.) It is probable that this issue is not of very great importance. There has been no State action as yet under the provisions of the Weeks Act, and apparently Congress has been willing to approve in advance the negotiation of compacts relating to particular questions or to a particular region without serious delay. The more impor-

tant question, in any event, so far as the administrative departments are concerned, is that raised above—the integration of possible programs developed under a compact with the exercise of the powers of the Federal Government relating to that question and the formulation of adequate policies in consequence.

After a compact has been negotiated, after it has been ratified by Congress, and finally after it has been ratified by the negotiating States, there comes the third point at which the Federal departments may have an interest in it. Provision may be made for some continuing execution of the compact through a permanent administrative organization which will find it necessary to secure cooperative action on the part of the Federal Government. Thus the Port of New York Authority in the development of its program has frequent occasion to cooperate with the War Department and the Interstate Commerce Commission as well as with the local authorities within its region such as the various dock commissioners. Similarly the Boulder Dam Act authorizing the extensive program of construction and operation centered at Boulder Dam is based indeed upon the Colorado interstate compact, and certain aspects of that program still require further negotiation with the State of Arizona because of the refusal of Arizona to ratify the compact.

6. Appraisal of the Interstate Compact Method

Many students of the compact as a device have pointed out the uncertainties associated with its employment as a means of securing State cooperation in the development of streams in view of the existing conflicts of law among the States relating to water rights. These uncertainties are increased because of the fact that there is no clear line determining the ultimate application of Federal authority over navigable streams or regulation of the sources of supply of those streams. Thus one must proceed with caution in the use of the interstate compact unless there is a most careful examination of the specific problems to be dealt with and of the assignment of powers to any continuing administrative agency that may be set up. While it is true that some kind of joint regional authority might result from the use of the interstate compact and Federal cooperation, it is obvious that one cannot generalize in advance concerning the nature of this organization and the powers to be assigned to it as well as the financial provisions which might enable it to carry on its operations. It is conceivable that direct grants for public works construction relating to the program developed under the interstate compact might be made by the Federal Government, credit might be extended to the interstate agency

established, and grants in aid might be employed as, for example, in highway construction, or Federal programs relating to reclamation, soil erosion, and forests might be adjusted to the program developed by the interstate compact agency.

There is much interest in the compact as a device at present and some speculation concerning its future. How far apart points of view may be is illustrated by the discussion of this topic in a book entitled "Uniform State Action", by W. B. Graves, from which the following is quoted:

There is much difference of opinion regarding the effectiveness of this method of solving the difficulties arising between States. There are those who feel that the intricacies of the negotiations, and the time required for them, place definite limits upon its usefulness. The fact that there were but 24 acts of Congress approving such compacts in a period of 192 years, between 1789 and 1918, would seem to lend some weight to this opinion; however, in the 13 years from 1918 to 1931, 31 such agreements were approved by Congress. Speaking on the question of utility regulation before the American Academy of Political and Social Science in November 1931, Gov. Gifford Pinchot, of Pennsylvania, spoke as follows:

"Interstate compacts are occasionally advocated as a solution. There are cases in which they have their uses. But that is only when competition between neighboring States is the essence of the problem, as in the soft-coal industry of Pennsylvania, West Virginia, Ohio, and Kentucky.

"In most cases, and on the face of it, in view of the length of time it has taken many of our States, including New York, Pennsylvania, and New Jersey, even to decide that they did not want a compact, and the longer time it might require to decide that they did, discussion of interstate compacts seems to be merely a way to prolong debate and keep us from doing anything. I used to be open to persuasion in the matter of compacts, till I came to understand their capacity for interminable delays. Then I saw the error of my ways. The Boulder Dam compact, for example, dealing with one dam in one river, took something like a dozen years to put through. While I do not question the sincerity of those who propose this solution they should consider such facts."

Speaking on the same program from the same platform, Col. William J. Donovan gave expression to an opposite point of view, even as related to the Boulder Dam incident:

"On various occasions I have offered the suggestion that in problems common to several States, which transcend the power of any one of the State governments to deal with effectively but which are regional rather than national in character, there is a method provided for in the compact clause of the Constitution under which, subject to the approval of Congress, the States concerned can undertake by agreement to deal collectively. This suggestion was born out of my experience in participating in the so-called "Boulder Dam and Rio Grande compacts." Here were situations that were beclouded by the accumulated bitterness and jealousies of several generations. Superficially it may be said that these States were dealing with only one river, presenting only one problem. Actually, however, these river controversies of the West involve considerations that we of the East find it difficult to comprehend. To us a river is only a river; but to the arid regions of the West, a river is the staff of life, a vitalizing force upon which the

people of those States depend not only for the generation of power but to give sustenance to their crops and to supply the water necessary to support life in that desert country.

Compared to these vital necessities of life, the problems we would encounter here under the use of the compact method are insignificant. If these States of the West, after years of bitterness and fruitless resort to litigation, found a solution of their problems only by the compact method, it would seem that much less difficulty would be found in meeting the regional questions of the control of utilities where the interests of the people are supplementary rather than antagonistic and divergent."

These two conflicting points of view should make some definite contribution to our understanding of the possible value and of the limitations of this method of securing uniformity.²⁰

The Springfield Republican, in its issue of June 25, 1935, discussed the Limitations of Interstate Compacts in the editorial which follows:

The interstate compact idea, which has been commanding more attention of late, is seldom discussed with reference to effective enforcement. If half a dozen or more industrial States of the North and South should ratify an agreement to maintain certain uniform labor conditions, it may be assumed that each State would enact a statute making those conditions, such as fixed standards for minimum wages and maximum hours and the banning of child labor, compulsory within its own territory. The compact to that extent, at least, would be respected.

It does not follow, however, that the standard of enforcement in each State would be uniform. The law embodying the compact would doubtless be better enforced in some of the States than in the others. If the New England States should enter into a compact with the Carolinas and Georgia, lax enforcement in the South could not be prevented in New England. Yet a minimum-wage and child-labor law in Georgia that was practically a dead letter would subject the New England textile industry to cutthroat competition precisely as if no interstate compact existed. Unless the compact were uniformly enforced there would be the same tendency that has been so evident for years past for industry to move from the high-cost to the low-cost States.

Nothing could be done by the Federal Government to enforce these compacts. The consent of Congress is constitutionally essential to their validity, but in approving them Congress incurs for the Federal Government no obligations to make them effective in practice. The Federal courts would also be powerless.

The fact is that, for the sake of competitive advantage, the State of Rhode Island could ignore a compact even with Massachusetts, not to mention far-away North Carolina or Georgia, with an impunity greater than that attending Japan's violation of the nine-power treaty in seizing Manchuria. For Japan did incur some risk of war with the other treaty powers, but Massachusetts could not coerce Rhode Island, not to say North Carolina or Georgia. Our "sovereign" States cannot wage war on each other, even if they are "sovereign." The Federal Government would be in duty bound to stop such belligerency within the Union.

The interstate-compact clause of the present Constitution is obviously a vestigial relic of the first constitution, which was adopted in 1777 and endured about a dozen years. Under the Articles of Confederation the States were overshadowing in

power, while the Central Government was so weak as to be treated with contempt. Our second Constitution was adopted in order to strengthen the Central Government. Its main purpose was centralization to the extreme limit of popular acceptance in that period. The States, hitherto substantially independent in fact, were constitutionally subdued, but vestiges of their original sovereignty survived in the Constitution of 1787. This compact clause, however, served no purpose whatever for considerably more than a century, and its renaissance in recent times is largely due to the limitations placed by the Federal courts upon the expansion of the jurisdiction of the Central Government.

Its feebleness, if not its futility, as a substitute for a national power equal to the performance of functions overreaching State lines, must in time be demonstrated if it is experimented with on a broad scale in matters vitally affecting the life and economic interests of the people.

Mr. Horace A. Davis, to whose discussion of the use of public authorities in an article entitled "Borrowing Machines", published in the National Municipal Review for June 1935 we have already referred, finds a distinct place for a certain kind of use of the compact. He states:

"There is a genuine need for authorities to manage large interstate projects. Under circumstances such as prevailed in New York Harbor, local municipal government was paralyzed and a radical departure from the old inadequate agencies was imperative. The port authority was a happy solution. There is no possibility that it will be abandoned nor much likelihood that it will cease to function admirably. In like situations the several States concerned cannot do better than get together, create an authority, and hand over to it the whole business, with the broadest power and control."²¹

The interstate compact is obviously not a device that can be employed as a relatively simple solution to the problem of reconciling areal extent of problems with adequate extent of governmental jurisdiction. Its friends probably claim too much for it, and one may even suspect that it may be urged on occasion by some people who are attempting to avoid any public action at all. The limited experience which we have thus far had with its use reveals the fact that negotiations are long and constantly delayed by the necessity for dealing with the vested and special interests which are interwoven with the various separate governmental units whose consent must be acquired. But we must not forget that this is also true of the use of other channels of political action. A more serious criticism is the uncertainty that surrounds their enforcement—the criticism stressed in the editorial from the Springfield Re-

²⁰ Uniform State Action (Univ. of N. C. Press, 1934), 24-25.

²¹ See the interesting account of the Port of New York Authority in Fortune, issue of September 1933, referred to as the "life story of a poor but honest corporation which failed to the tune of a \$175,000,000 success, with a \$10,000,000 income for the year 1932 and \$20,000,000 liquid assets in the bank."

publican cited above. Here, too, it may be said that a similar uncertainty is present concerning the adequacy of enforcement of law and the quality of its administration even without the use of the compact, and where the quality of such enforcement and administration of the laws on a common subject among several States is an important item in industrial competition. Nor should we overlook the possibility that States which are hesitant to adopt such legislation may proceed with more assurance, and achieve adequate enforcement, if they are assured that similar minimum standards are being adopted by other States similar in their problems.

The effort to reach some more effective solution of a problem which requires the marriage of both national and State constitutional power is illustrated by the negotiation of an oil compact among the oil-producing States based upon the internal police power of each State employed to protect natural resources with the interstate-commerce power of the National Government employed to forbid the movement out of the State into another of oil extracted in defiance of the State law. This effort was nullified by the decision of the Supreme Court in *Panama Refining Co. v. Ryan* (55 Sup. Ct. 241, 1935), but on the ground that no standard had been set in the legislation for the guidance of the President. Following the decision, the Congress passed an even more severe restriction (Public Law No. 14, 74th Cong.), which forbids interstate transport of oil produced in excess of State quota, with no discretionary delegation.

Our chief interest in the present analysis, however, relates to employment of the interstate compact in the planning of national development policies and in their subsequent realization through construction, operation, and administration generally. Clearly there can be no responsible single answer, from this point of view, to a question concerning the suitability of the compact. Their peculiar virtue—indeed, necessity—lies in their employment at those points where a problem is local in its incidence and its solution local in its benefits, yet beyond the jurisdiction of a single State. Probably the example of the Lake Champlain Bridge illustrates this reasonably well; the development of the port of New York is also a local question, but it has important implication for commerce generally because of the relationship between that port, the hinterland, and the world generally, while the traffic across the Lake Champlain Bridge is not so far-ranging in its origin and destination. Related to this virtue is the possibility which follows, of isolating the costs of projected public works to be undertaken by the interstate authority and fixing the means of paying for them, in closer relationship to those most obviously benefiting from them, and

thus creating a more responsible attitude toward such projects. Here again, at its simplest, such a condition is represented by "self-liquidating" projects as a bridge which pays for itself through the tolls charged the users. Thus the Port of New York Authority has been able to construct and operate various structures, while in the development of its major plans it must wait upon the consent of many Federal, State, municipal, and other officials and the railroads and shipping lines.

The use of the compact in water-resources planning and in the construction and operation of projects following such planning is carefully analyzed in the section of the report of the National Resources Board to which reference has already been made. "It is difficult to see", the report states (p. 380), "how interstate water problems can be solved satisfactorily by compacts as now negotiated. Such compacts frequently are drafted in the turmoil of the competitive area and sometimes without all the pertinent technical and social facts at hand. They are often the result of outright compromise and thus rest upon bargaining power rather than the reasoned application of fact."

The same point, one may repeat, may also be made concerning other methods of arriving at agreed policy; but in the development of water resources it is true that there is greater confusion in legal precedent and the fixing of the jurisdiction of national as against State jurisdiction than in other fields of development. It is probable that it is this basic confusion in the law relating to the ownership and use of water which is at least as guilty as the employment of the interstate compact. This does not, however, change the fact that the compact does not lend itself readily to the solution of the legal problem left by the decisions of the courts.

Improvement in negotiation, finally, may be achieved through the deliberate fostering of coordination in the area of all the developmental planning, as recommended throughout this report, by all the units of government concerned and by the inclusion of the use of compacts in the resulting comprehensive program where their suitability would have first been surveyed. Such preparatory work would have an educative value as well as establish the requisite priorities fundamental to construction and operation.²²

²² An invaluable discussion of this problem as reflected in the attack upon stream pollution is given in S. Doc. 16, 74th Cong., 1st sess., entitled "Stream Pollution and Stream Purification." This is the report presented by Senator Loneragan of a conference between local, State, and national officials and officials of interested conservation societies called by the Senator and held in Washington on Dec. 6, 1934. It is significant, in view of the report of the National Resources Board cited above, that the majority of those registering their views concerning the alternative plans of proceeding by compact creating sanitary districts as against using some kind of Federal development authority, supported the latter. See especially pp. 91-101. It may be added that

By their nature compacts among the States are primarily an expression of something approaching a regional consciousness of need and a desire to meet that need. The chief danger in their employment, from the point of view of national development, is that they may be undertaken without adequate regard to the coordination of their programs with those of the other units of government which share, in some measures and varying with the particular function, in the responsibility for dealing with problems in the area. The fact that the National Government exercises responsibility in matters affecting stream navigability, that a town or city exercises responsibility in the matter of sewer construction and operation, makes the most careful preliminary planning essential. Here again the attitude of those responsible for planning national developmental policies should be one not of discouragement but of analysis of the situation which has created a movement for the compact and the facilitation of the employment of all means of which are necessary, in their particular way, for solving the problems. Any device, such as the compact, which may be used to foster a greater awareness of the incidence of cost and of benefit of projects, should clearly be kept within the armory of those responsible for development policies.

From the historical studies of those who have gone into the use of the interstate compact, certain general observations clearly appear. In the first place, it may be stated that compacts when most serviceable have dealt with problems that were traditionally "governmental." The best example of this point is the early and continuous use of the interstate compact for settling boundary disputes. "The constitutional provision permitting States to enter into compacts or agreements, with the consent of Congress", Buel W. Patch has pointed out, "carried over into the basic law of the United States one of the methods used during the colonial period to settle boundary disputes."²³

A second proposition which clearly appears is that the interstate compact is a substitute for litigation before the courts. As a matter of fact, some authorities consider this curative purpose, namely, the settling of present and prospective controversies between the States, the principal use and justification for the compact clause. In this connection the general conclusions of Messrs. Frankfurter and Landis are illuminating. The use of the interstate compact is indicated, they have stated, whenever the issue, because of its range, intricacy, and technicalities makes the courts an ill-

adapted instrument for settlement and wherever situations arise beyond the process of adjudication.²⁴ In connection with the last-mentioned situation, Frankfurter and Landis refer particularly to the Colorado River question where "continuous and creative administration is needed; not litigation. * * *

Still another observation relative to constitutional powers and structure may be made. The interstate compact may be a useful instrument when the Federal Government finds itself with insufficient authority to deal with a regional or national problem. Concretely, when the regulation of economic activities is the desired objective and the commerce clause is held not to cover the situation, the interstate compact may be the way out. At the present time, for example, it is widely argued that the N. R. A. might be replaced by an interstate compact.

The above general analysis is the necessary basis for a final evaluation relative to the compact method; but we need to be more specific, more analytical and penetrating. There are several aspects of the interstate compact which have heretofore received little or no consideration. This is surprising in view of the fact that decisive constitutional, administrative, and political matters are involved. We need to give consideration to the following matters, namely, the assumed equality of States in negotiating and operating compacts; the appropriate subject matter to be dealt with; the possibility of discharging the planning function successfully within the superstructure of the compact; the probability of obtaining satisfactory administration and compliance; and the effect upon the future cooperation and effectiveness of governmental operations.

The first factor we have isolated, namely, the assumed equality of States in negotiating and operating compacts, has probably not entered into discussions relative to the compact method simply because it is fraught with so much political and emotional dynamite. Nevertheless, in a realistic and candid examination this matter cannot be sidestepped. Briefly stated, the customary approach to prospective compacts is based upon the following assumptions: (1) Every State of the Union is sovereign, therefore (2) every State is equal, therefore (3) every State should get as much out of what is to be settled, or to be divided, as any other State entering into the proposed compact.

These assumptions may be good jurisprudence and the proper bases of comity, but considerable question arises concerning their realism and social desirability. The unequal distribution of natural resources, of climate, of economic advantage, or of transportation

Illustrative of the examples of delay in dealing with water problems was the protracted negotiation ending with legislative failure to agree upon a program acceptable to all, between New York, New Jersey, and Pennsylvania over the use of the Delaware River waters.

²³ See his recent and authoritative study entitled "Interstate Compacts", Editorial Research Reports (June 1935).

²⁴ Frankfurter and Landis, *op. cit.*

facilities, with their resulting effects upon population concentration, wealth, and cultural opportunity, challenges these juristic and artificial hypotheses. In short, the assumptions of planning, chief of which is that resources, physical and human, should be used to the best social advantage irrespective of artificially established interests or boundaries—these assumptions quite naturally come into conflict with certain governmental theories. The jurist and the State's rights champion would say, "every State must share equally in the exploitation of a natural resource which is to be divided between several States; or at least there should be secured to each State that portion of the natural resource to which it has already established a prior claim." On the other hand, the planner is impelled to conclude, "let us develop the physical and human resources of the country at the points at which the maximum social advantage will be secured." This is the regional and national view. However, there is eloquent evidence to the effect that the planner's analyses are difficult to achieve, particularly when related to natural resources, within the limits and the assumptions of the compact method. Colorado River development is a case in point.

The use of the interstate compact should be confined to appropriate subject matter. This is point number two, and one that we have already touched upon in stating that the compact method has proved most serviceable when applied to traditionally "governmental" functions. As a theorem of this principle we may state that the interstate compact has not proved a very effective instrument when the subject matter is social and economic planning. The two examples of note are the Port of New York Authority and the Colorado River compact. What are the reasons for the compact's proving successful in the case of simple, traditional governmental functions and for proving disappointing in the case of more complex social situations? The answer, in large part, seems to be that the compact is adapted to the solution of some problem or controversy arising between States when this matter can be solved once and for all. A most obvious example of this is, again, the settlement of boundary disputes by means of a compact entered into between two States. The second part of the answer seems to be that the interstate compact succeeds when the administration of the agreement can be handled by means of uniform action of compacting States and when each State fulfills its part of the agreement through the established machinery of State Government.

If, then, it is true that the compact method may be expected to succeed when confined to subject matter involving definite conclusions and uniform laws to be

administered through the already existing departments of government, then the interstate compact should not be recommended for situations involving the opposite set of circumstances, that is, when the problem is a continuing one; when the solution demands the establishment of independent machinery over and above the separate State departments; and when independent planning and autonomous execution are clearly indicated.

The interstate compact has not proved a satisfactory medium for continuous and progressive planning activity; this is point no. 3. The reason for this limited competence is that additional grants of authority and frequently approval of action taken must be sought by the agency executing the compact, instead of its having power to go ahead and make its own independent plans. Needless to say, the planning activity is involved when the subject is economic or social and when the problem is a continuous one.

The means of begetting compliance is a necessary element of every form of administration, governmental as well as business. Persuasion and compulsion are not antithetical; they are coordinate, and both are necessary when important interests are at stake. Let us then recognize the necessity and appropriate place of compliance and compulsive measures. In the administration of compact projects, such authority is conspicuously absent. The appointment of commissions and resort to the courts are both possible, to be sure, but each of these remedies is slow, relatively ineffectual,²⁵ and expensive. Instead of controlling, the authority created under the compact is itself controlled; it is merely the obedient servant of the respective legislatures. It may be said, therefore, that the administration resulting from compact provisions is almost sure to be unbusinesslike, because it will lack independence, initiative, flexibility, and coercive authority.

Granting, it may be said, that a Federal or regional agency can move more quickly and more effectively than can the agency set up by a compact, still is it not true that the process of gradual persuasion and education, as slow moving as it admittedly is, will be preferable in the end? Proponents of the compact method can point out that the roots of democratic government lie in a sense of participation primarily developed by local self-government. They deliberately say that regional planning should move more slowly if, in the process, the thinking of people can be changed and the advance can be assured of greater permanence. The advantages of persuasion are pointed to particularly

²⁵ See the leading court cases bearing upon the general question, namely: *Virginia v. West Virginia*, 246 U. S. 365 (1917); *Virginia v. Tennessee*, 148 U. S. 503 (1893); *South Dakota v. North Carolina*, 192 U. S. (1904); *Green v. Biddle*, 21 U. S. 1 (1823).

when comparing the merits of what is sometimes the alternative to a compact, namely, protracted court litigation.

Those who champion the use of the interstate compact sometimes attempt to make it clear that the compact method and persuasion are interchangeable terms, whereas any method other than that means the opposite of persuasion, namely, pressure. Such a position is untenable. Persuasion is also necessary in the work of a corporate regional authority such as the Tennessee Valley Authority. In thinking about this matter we should not let ourselves confuse the question of fundamental organization and method, namely, the relative merits of the interstate compact, the Federally created regional development authority, or something else, and the technics of carrying out any one of the respective methods of governmental cooperation. Persuasion is a technic which is common to all forms of governmental cooperation.

A final consideration needs to be mentioned, namely, the tendency of compacts, in some cases, to encourage particularism, selfishness, and jealousy on the part of individual States, rather than the broad regional cooperation which is to be desired. When a particular question such as a boundary dispute arises, and is settled once and for all, this above-mentioned result is not forthcoming; better relationships should ensue. However, when the compact method is applied to complex social and economic matters, such as those involved in the Colorado River compact, then the objectionable results mentioned are quite likely to follow. Compact-making becomes a matter of horse-trading. Each State tries to get as much as it can for itself. To be sure, this is quite natural. But the rejoinder is that some other method of governmental action may be possible and preferable, which would emphasize common regional interests rather than those resulting from

artificially drawn State lines. Under the compact method the State is the dominant symbol; for it there should be substituted the concept of regionalism. Because the representatives of the various States entering into a compact are special pleaders for their respective causes, differences between States become increased, compromises more difficult, and the recognition of over-all common interests less telling. This is the distinct impression one receives after a close examination of the history and negotiations accompanying the Colorado River development of recent years.

In fashioning future courses of action it should be kept in mind that regional problems, particularly those growing out of water-use programs, require unified regional planning and execution. When an issue involves only two States; when it can be settled once and for all; when continuous planning and administration are not necessary; then the compact method is likely to be a serviceable instrument. This is likewise apt to be the case when State legislatures are amenable to the same interests, e. g., the railroads, or power companies; under such circumstances uniform action becomes possible. Then, too, the possibility of the State making its own interests subservient to the larger regional interests probably varies among various groups of States in the several parts of the country. Obviously, the success of any interstate compact depends in no small measure upon the level of political intelligence, the tradition of cooperation, the existence of regional consciousness, the wealth and foresight of the governments of the compacting States. It may be said, therefore, that the value of the compact method not only depends upon the subject dealt with, but no doubt its success also hinges upon the political sophistication of the people of the various regions of the country.

CHAPTER VII. INTERSTATE COMPACTS—THE COLORADO RIVER EXAMPLE

1. Introduction

In the preceding section, the interstate compact was discussed as a general device for solving the regional problem: that is, the devisal of special political structures to meet the needs of certain significant areal questions. In order to test the tentative conclusions in that chapter, one might well consider the compact method as it has been applied to a specific situation. Chapter VII as follows, discusses the use of the compact method in an attempted solution of the problem of developing the Colorado River Basin. Although there have been a considerable number of interstate compacts during American history, the Colorado River compact does not have many precedents. As a matter of fact, if regional planning and economic development be considered the dominant characteristics of the Colorado River agreement, then only the Port of New York Authority bears a close resemblance.

There are five steps which must be, or may be, taken in negotiating and concluding an interstate compact; these are: (1) Congress authorizes the negotiation of the compact and outlines its purposes. (2) The State legislature authorizes commissioners representing them to meet and negotiate a compact. (3) The commissioners meet (under the chairmanship of a Federal representative) to negotiate and sign the compact. (4) The State legislatures ratify the compact. (5) Congress ratifies the compact. This procedure was used in drawing up the Colorado River compact, except that Congress ratified the compact before approval had been given by all of the State legislatures. This was made necessary, of course, by Arizona's failure to ratify.

The interests and welfare of seven States, hundreds of cities and towns, and millions of people are interwoven in the activity centering around the development and use of the Colorado River and its tributaries. In the arid lands of its basin this great river system makes possible the irrigation and cultivation of hundreds of thousands of otherwise untillable acres. In this part of the country everything is subservient to an adequate water supply. In a sense the Colorado River constitutes the determining factor in the development of the Pacific Southwest. Agriculture, industry, and population are all dependent upon the river. Moreover, its potentialities are great. The power resources and mineral de-

posits of this area promise a profitable development of industry and a more universal use of cheaper electricity in homes and on farms. At the same time this river, which is the lifeblood of a whole region, is a constant menace during its flood stages to the lives and homes of many people living in its fertile valleys. At the present time the Federal Government, through the Boulder Dam and related projects, is seeking to eliminate in a measure the flood menace, while at the same time constructing one of the main units in a series of hydro developments which will ultimately make possible the full utilization of the river.

(a) *Physiography.*—The Colorado River is the largest stream in the southwestern part of the country. The main stream heads at the Continental Divide in Colorado a few miles northwest of Denver at an elevation of 14,000 feet above sea level. (See fig. 24.) From there the river flows westward through Colorado to the Utah line. After cutting across the southeastern corner of Utah, it enters a 400-mile stretch of canyons, at first winding through the northwestern part of Arizona, then forming the boundary between Arizona and Nevada. After leaving the canyons it forms the boundary between Arizona and California, crossing the junction between those two States and Mexico and flowing along the boundary between Arizona and Mexico for a few miles. From that point it flows through Mexico into the Gulf of California.²⁶

Many rivers and streams flow into the Colorado along its course, increasing its flow and complicating its problems. Of these tributaries the most important are the Green, the San Juan, the Little Colorado, and the Gila. The Green River rises in southwestern Wyoming, flows south cutting off a tiny part of Colorado, and joins the Colorado in Utah. It is the largest tributary of the Colorado, contributing almost half of the water flowing in the stretch just below the junction. Its drainage basin is 70 percent greater than that of

²⁶ The mileages on the main stream are approximately as follows:

	Miles
In Colorado.....	245
In Utah.....	285
In Arizona.....	292
Arizona-Nevada boundary.....	145
Arizona-California boundary.....	235
Arizona-Mexico boundary.....	16
In Mexico.....	75
Total length.....	1,293

the Colorado above the junction. The San Juan, next largest tributary of the Colorado, has its headwaters in New Mexico, flows through the junction of four States (Colorado, Utah, Arizona, and New Mexico), and enters the Colorado River in Utah, just north of the Utah-Arizona line. The Little Colorado also arises in New Mexico, flows across Arizona and enters the Colorado about 50 miles south of the Utah-Arizona line. The Gila River is the third largest tributary arising in New Mexico. It flows across the whole State of Arizona and enters the Colorado at Yuma, Ariz., a few miles before the Colorado begins its journey through Mexico.

The area drained by the Colorado River and its tributaries includes about 240,000 square miles.²⁷

The northern part of the basin is bounded on the east by the Rocky Mountains, which rise to an elevation of more than 14,000 feet; on the north by the Wind River Mountains in Wyoming, which reach about 13,700 feet; and on the west by the Wasatch Mountains in Utah, which reach altitudes exceeding 13,000 feet. This part of the basin has a mild summer climate but very severe winters. Temperatures of 30° and more below zero are not uncommon. Precipitation ranges from about 10 inches along the Green River to more than 60 inches along the Continental Divide. More than 75 percent of the entire discharge of the river at Yuma originates in this northern part of the basin above and including the Green River.

The central part of the basin is a great plateau which has a general elevation of between 5,000 to 8,000 feet. It is bounded on the east and the west by high mountain ranges. The river itself has cut deep gorges through this plateau and at many places the level of the stream is hundreds of feet below the plateau. The precipitation in this central part ranges from 10 inches over most of the plateau to 30 inches in the higher mountains. Temperatures here range from 100° in the summer to below zero in the winter.

The southern part of the basin, lying mostly in Arizona, is but a few feet above sea level. The precipitation ranges from 1½ to 8 inches and the temperature from about 32° in the winter to 120° in the summer.

²⁷ This area is divided among 7 States as follows:

	Square miles
Arizona	103,000
Utah	40,000
Colorado	39,000
New Mexico	23,000
Wyoming	19,000
Nevada	12,000
California	4,000

(b) *Population*.—In the basin proper the population is small and the land is sparsely settled. In many cases there are less than five people to the square mile. According to the 1930 census the concentration of population in the seven States of the drainage basin was as follows:

State:	Population per square mile
Arizona	3.8
California	36.5
Colorado	10.0
New Mexico	3.5
Nevada8
Utah	6.2
Wyoming	2.3
United States	41.3

While all of these States have a population concentration figure considerably below that of the United States as a whole, the States of California, Colorado, and Utah exceed the other four by reason of their possessing one or more large centers of population. However, none of these large cities (Denver, Los Angeles, San Francisco, and Salt Lake City) is in the drainage basin itself. In the basin there is no town with a population of more than 15,000. Most of the rural population of this region lives in the broad valleys where there is an ample supply of water for domestic and agricultural uses. Before the middle of the nineteenth century the population of the area consisted mainly of small Spanish settlements and scattered trading posts. Since that time, however, several factors have contributed to the growth of the area. The California gold rush and the Mormon migration into Utah started the first period of rapid growth. This was followed by the building of railroads, the discovery of oil, the development of irrigated land and hydroelectric power, and the attraction of tourists and health seekers, all of which helped to bring about the rapid increase in population. During the three decades from 1900 to 1930 the seven Colorado River States increased their population as follows:

State:	Percent Increase 1900-30
Arizona	254
California	282
Colorado	92
New Mexico	117
Nevada	115
Utah	84
Wyoming	144
United States	62

Thus, while this area is still sparsely populated in comparison with the rest of the country, its population is growing much faster. With the exception of California, most of which is outside the drainage basin, the population is largely rural; none of the other six

States has as large a percentage of urban population as the country as a whole.

To a large extent this growth in population has followed or accompanied the development of irrigation and power on the rivers of the Colorado system, and this relationship seems likely to continue in the future. In fact, the saturation point for population in this area will depend largely upon the use that can be made of water resources existing there.

The Colorado River Basin is a good example of those regions within our national boundaries which represent more or less unified areas with common economic problems. The planning problem in this region has many ramifications. It involves not only regional, but national, international, State, and local interests. It is concerned with reclamation and agricultural policies, development of industry and natural resources, financing and carrying out of public works, coordination of Federal activities. It is affected by population trends, shifting markets, national and local governmental policies and public opinion. In order to provide for the most advantageous development of the region these various factors cannot be considered properly in independence of each other; their interrelationships must be discovered and taken into account in any comprehensive planning program.

In the development of the basin thus far the political aspects have been dominant, overshadowing the social and economic aspects. There has been little conscious regional planning; at the same time, problems of a regional character have become increasingly important. Conflicts between State and local interests have grown more and more bitter; concurrently the need for cooperation has become more evident.

Before we can deal adequately with these larger planning problems, however, we need to refer to the character of the region and the basic resources and economic interests found there.

The major source of income for the entire region is agriculture. The area in farms in the seven States varies from 43.5 percent in Colorado to 5.8 percent in Nevada. Early developments in agriculture were largely unplanned. Small acreages were cropped where water could be easily and inexpensively diverted from the rivers and streams. There was little thought given to the problems of supply and demand for agricultural products. For some time this development was confined to small areas serving local markets, but with the advent of the railroads and the development of refrigeration cars the market area widened to include the whole of the United States. California's superior position in the citrus business is a matter of long standing; in recent years, however, the citrus

area has spread eastward along the southern boundary of the country. In several other crops such as barley, fresh fruits, and vegetables, the Pacific Southwest has captured national and even international markets. The high quality of potatoes, celery, strawberries, cherries, and other products grown in the mountain States of the basin has assured them of a good market in the eastern metropolitan centers. This quality factor also applies to the livestock raised in the upper basin States.

Estimates regarding the future of agriculture in the area, the amount of irrigable land, and the feasibility of various irrigation projects differ considerably. Studies under way at the present time will probably clarify the situation. The economic considerations involved in agricultural and reclamation policies are basic to this area and furnish the starting point in planning its future development. There has been a need in the past for some definite policy regarding the retirement of submarginal lands as more fertile ones are brought under cultivation. The available evidence tends to show that the peculiar agricultural pursuits of this area will continue to prosper.

Stock grazing has created a problem of erosion which has been a severe handicap. Due to the concentration of large herds on good grazing land, the vegetation has been almost totally removed in large areas, thus leaving the top soil exposed to the winds. This is one source of the recent dust storms which carried millions of tons of fertile soil across the country and into the Atlantic Ocean. The Taylor Grazing Act, passed recently, which limits the number of head of stock for any particular area, is beginning to lessen this problem of erosion.

In the mountainous areas where agriculture is not feasible, mining is the most important industry. The leading States of the Nation in the production of copper, lead, zinc, gold, and silver, are in the Colorado River Basin. About 75 percent of the total national production of copper is found in the basin. Almost 80 percent of the national supply of silver comes from the region, 40 percent of the national supply from Utah alone, and about 22 percent from Nevada. California and Colorado are the leading States of the Union in the production of gold, and about 70 percent of the total national production comes from the basin.

Certain mining areas of the region have been handicapped by high rates for freight and power. However, as Boulder Dam is completed and other power projects are developed, rates for power should be low enough to enable a continuous expansion of the mining industry. The development of new power sources will not only encourage the expansion of present types

of mining activity but will open up new fields in the electrochemical industry. Some of the more sanguine authorities believe that electrochemical industries may be able to absorb the larger part of the power developed at Boulder Dam. However competition from established plants in the East will have to be met. According to a recent report ^{27a}—

There are many districts in this region that contain noteworthy deposits of metals and nonmetallic minerals, some of which have already yielded a large production but will probably not contribute raw materials to industries near the dam. Some of these, or groups of these, may, when operated, become potential consumers of power transported by trunk lines from Boulder Dam, but on the whole it is believed that the number will be small. It is believed that the chief hope for markets for Boulder Dam power arising out of mining activities will lie in manufacturing industries located near the dam and using nearby mineral raw materials.

Petroleum has been one of the most important factors in the development of the southwest. It is highly concentrated in small areas, largely in California. The availability of cheap fuel oil derived from petroleum operations has been an important factor in the industrial development of the region.

The production of fertilizer where power is available may be the means of recapturing a considerable amount of our present import business. Large quantities of fertilizer from Chile and Germany are now being shipped at high rates into the Colorado River Basin. Both the ports of Los Angeles and San Francisco report huge quantities annually.

For a long time industry in the area consisted of supplying a relatively small number of commodities for local consumption. The great distance from eastern markets and the high transmountain freight rates have combined to retard industrial development. However, as markets developed on the Pacific coast and after the Panama Canal was completed, many branch plants of eastern firms were established there. After a slow start due to distance from eastern markets, lack of labor supply and cheap power, and high freight rates, industrial development is now proceeding vigorously ahead. With the coordination of railroad facilities, the reduction of rates, the tapping of eastern and European markets, and the development of power and raw materials, the Colorado River Basin should increase its industrial activity measurably.

This region has been called for some time the playground of the nation; and its tourist trade has been no small factor in its total business. The development of national parks and forests, the construction of transcontinental highways, and the publicity and advertis-

ing of energetic chambers of commerce have attracted thousands of citizens who were anxious to "see America first." Boulder Dam itself will offer an entirely new area for recreational purposes. The lake growing behind the dam is already spotted with pleasure boats which will ultimately carry passengers up into the Grand Canyon region.

The program of construction and development centering around Boulder Dam in the Black Canyon of the Colorado River epitomizes the community of interests and the necessity of joint planning and action on the part of all the States in the area. In addition to the dam itself,²⁸ brief consideration needs to be given to the Metropolitan Water District, the All-American Canal, and the power program. This huge Boulder Dam project not only raises queries regarding the need for additional water, power, and cultivable land, but it also opens up the question of the proper region for future planning. Before discussing the economic and physical aspects of this development it is necessary to examine the historical background leading up to the actual construction program.

2. Early Development of the River

(a) *Early irrigation and diversions.*—Diversions of water from the river for irrigation purposes occurred almost simultaneously with the coming of the white man, the first diversions being made in the days of the Spanish fathers. From that time on individuals and groups have gone ahead with the development of the river on their own initiative. As early as 1849 the idea of bringing water from the Colorado River into the Imperial Valley in California was conceived by Dr. O. M. Wozencraft. A report of the War Department in 1877 contained a study of the flood conditions of the river and a report on an investigation of a canal route to irrigate the Imperial Valley. In 1886 the Colorado River Irrigation Co. was formed. However, this company soon failed and 10 years later was succeeded by the California Development Co. Four years later a contract was signed for the construction of the Im-

²⁸ Boulder Dam, recently dedicated by President Roosevelt, was built under the direction of the Bureau of Reclamation. It is located in upper Black Canyon on the main stream of the Colorado River about 25 miles southeast of Las Vegas, Nev. The stretch of river where the dam is located forms the boundary between Arizona and Nevada. The dam is 727 feet above bedrock and will raise the level of the water 582 feet, creating a reservoir of 145,000 acres or 227 square miles, the largest artificial reservoir in the world. Thirty and a half million acre-feet will be stored by the dam when it is full, which amount is about 10 trillion gallons, or, in other words, approximately 80,000 gallons for every person in the United States. In order to hold back this tremendous volume of water, three and a quarter million cubic yards of concrete have been poured into the dam, making a structure 1,180 feet long at the top, 45 feet thick at the top, and 660 feet thick at the base. The power plant, located just below the dam, will have an installed capacity of 1,835,000 horsepower, which is four times that of Niagara Falls.

^{27a} "Mineral Resources and Possible Industrial Development in the Region Surrounding Boulder Dam", Department of the Interior, Washington, November 1934.

perial Canal. In March 1902 water was first turned into the canal, and irrigation of the Imperial Valley by Colorado River water began; by 1904, 75,000 acres were being cropped on this project. In 1902 Congress passed the Reclamation Act in order that the Federal Government might aid in the development of agriculture in these arid western States and provide for the beneficial use of two of its natural assets, land and water. Since that time, through the efforts of the Reclamation Bureau, many dams and canals have been built and thousands of acres have been put under cultivation. At the present time this Bureau is conducting a survey of all the lands of the basin with a view to determining the extent of possible future reclamation projects. While the earliest irrigation projects were developed by individuals and private groups at little cost because they did not entail any large construction work, later projects, farther removed from the river, could only be undertaken with the aid of the Federal Government. At the present time most of the easily irrigated lands have been irrigated and put under cultivation, and the remainder can be developed only through fairly large and expensive construction works.

(b) *Studies and investigations.*—Explorations of the Colorado River and its drainage basin began with the Spaniards in the sixteenth century. The history of these Spanish explorations is filled with tales of romance, discoveries, battles, massacres, and perilous journeys. Hernando de Alarcon first explored the Colorado at its mouth in 1540. He was followed by adventurers and missionaries in almost endless succession for 300 years. In 1847 the Mormons crossed the upper part of the basin and settled in the Salt Lake Valley, bringing with them a culture and a determination upon which they founded a prosperous civilization. A year later the gold rush brought thousands of pioneers to California. During these years hardy explorers, intrigued by the danger of the Colorado River, began their ascents and descents of the river, sometimes emerging with miraculous stories of thundering rapids and gigantic canyons, sometimes perishing in their attempts. The story of the Colorado is contained in legend and lore, in the reports of exploratory expeditions, and in the more technical reports of Government bureaus.

Scientific investigations of the river began in 1827, when Lieut. R. W. H. Hardy, of the British Navy, charted the Gulf of California and the mouth of the Colorado. In 1850 the War Department began its surveys of navigation possibilities on the river. In the same year irrigation facilities were studied in connection with the work of the boundary survey between the United States and Mexico. In the seventies the War

Department conducted further studies of navigation, reporting adversely on the improvement of the river for navigation. This department also made a report on the physico-geographical character of the river. In 1876 Lieut. Eric Bergland made a report on flood conditions, feasibility of irrigation diversions from the river, and the possibility of constructing an all-American canal to the Imperial Valley. In 1889 the United States Geological Survey began its measurements of the river with gaging stations on the Gila River. In 1896 the Mexican Boundary Commission made the first topographic map of the basin, including the section adjacent to Mexico. In the same year the War Department engineers again came to the conclusion that the Colorado was not worthy of improvement for navigation. With the establishment of the Reclamation Bureau in 1902, studies of irrigable land were begun in many parts of the basin. Two years later Congress authorized the Secretary of the Interior to make an investigation of the lower Colorado.

In 1916 the first comprehensive report on the Colorado River and its drainage basin was issued in the form of Water Supply Paper No. 395 of the United States Geological Survey, written by E. C. LaRue. This report dealt with the problems of river control, irrigation, water power, and silt; and included records of stream-flow measurement, lands irrigated, diversions from the basin, and a detailed analysis of the water supply of the main stream and each of its major tributaries. This report was the forerunner of three other water-supply papers which, taken together, provided authoritative and complete surveys of the region.²⁹

In 1920 Congress passed the Kincaid Act, which provided for an investigation of the irrigable lands in the Imperial Valley. This report, commonly referred to as the Fall-Davis report,³⁰ was issued in 1922. It contained not only data dealing with the Imperial Valley, but also the first recommendation for a large storage and power dam near the site of the present Boulder Dam development.

In 1924 the Weymouth Report, consisting of nine typewritten volumes, was issued by the Department of the Interior. This report dealt primarily with the problems of flood control and irrigation for the Imperial Valley. It contained a discussion of several al-

²⁹ Paper No. 556 by La Rue was concerned with the questions of water power and flood control on the Colorado River below Green River, Utah. This report was issued in 1925. Papers No. 617 and No. 618 were issued in 1929 and 1930, respectively. The former, written by Robert Follausbee, dealt with the upper Colorado; the latter, written by Ralf R. Woolley, covered the Green River. These 4 papers, consisting of more than 1,200 pages and more than 100 charts and diagrams, cover most of the possible sites for flood control, power, and storage works on the Colorado River system. Besides these major reports of the United States Geological Survey, several others have been issued.

³⁰ S. Doc. 142, 67th Cong., 2d sess.

ternative sites for a dam for that purpose, concluding that a dam in Boulder Canyon would be most feasible. This report also covered the questions of possible power generation and irrigable lands in the basin.

The Boulder Canyon Project Act, passed in 1928, set aside \$250,000 for further studies of the basin. This amount has been added to by subsequent allocations, and at the present time surveys of a very comprehensive nature dealing with irrigable lands, diversion projects, power development, flood and silt control, and other phases of Colorado River development are being carried on by the Bureau of Reclamation.

With this picture of historical developments, present problems, and continuing researches in mind, we can continue to an analysis of the first cooperative attempt in this part of the country looking toward the development of a large region overlapping State lines. Until about 1918 there was little effort made to formulate and carry out a plan for the coordinated development of the Colorado River system and its basin. About this time the amount of water being diverted from the river into reclamation projects became so great that it was realized that the natural low water flow of the river could no longer satisfy all of the users and that some kind of mutual understanding regarding water rights was necessary. Such an understanding necessarily involved a consideration of the law relative to water rights.

3. Legal Doctrines Regarding Water Rights

In this arid region where water is a scarcity the legal rights to its use differ, in most States, from those in the moist areas of the country. The riparian doctrine of water rights which exists throughout the eastern part of the country and in some of the Western States reserves the right to the use of water to the owners of land abutting on the river. Regardless of when or how continuously the water may be used, it is reserved in perpetuity to those who own the adjacent land. In many of the Western States and in 6 of the 7 States of the basin, the appropriation doctrine exists. This doctrine provides that whoever first takes the water from a stream and puts that water to beneficial consumptive use, or, in other words, appropriates the water, has earned the right to use the water, and that right cannot be taken away. Also under the appropriation doctrine prior rights are given preference, that is, he who first appropriates the water has a prior right over later appropriators. In some States a period of nonuse, differing in length in different States, is held to invalidate prior rights.

This appropriation doctrine, "first in use, first in right", has resulted sometimes in a scramble on the

part of water users to put to use as much water as quickly as possible in order to obtain prior rights.

4. Necessity for Intervention

It was the upper basin States' fear concerning the application and results of the appropriation doctrine, a fear kindled by the rapid development of plans for using Colorado River water in the lower States of the basin, that led to a conference of representatives of the seven Colorado River States in January 1919. The invitation was issued by ex-Governor William Spry, of Utah. Representatives of Arizona, California, Colorado, Nevada, New Mexico, Utah, and Wyoming met in Salt Lake City January 18–21, 1919, to discuss questions relating to the utilization of the water resources of the Colorado River and its tributaries. This conference resolved itself into the "League of the Southwest" and assumed the leadership in Colorado River affairs for some time. At this meeting the conference adopted the following resolutions, *inter alia*, setting forth the views of its members regarding the development of the Colorado River:

The history of irrigation throughout the world has shown that the greatest duty of water is had by first using it upon the upper reaches of the stream and continuing the use progressively downward. In other words, the water should first be captured and used while it is young, for it can then be recaptured as it returns from the performance of its duties and thus be used over and over again.

Attention is further directed to the fact that many of these irrigation projects of a magnitude to be developed only by the Federal Government can be properly carried on without interfering with smaller developments which should be undertaken by individual and corporate initiative, and we therefore urge upon the Interior and Agriculture Departments the adoption of a liberal and sympathetic policy in the granting of rights-of-way for reservoirs and ditches upon the public domain, where the same are essential to the development of such private projects.

We further urge the liberal administration of all land laws of the United States looking to the end of placing the lands of the United States in the actual possession of its citizens in order that the citizens may have a home and that the lands may go upon the tax rolls of the various States in which they be located in order that they may bear their just portion of the expense of State administration.

Along the lines set forth in these resolutions, we pledge ourselves to a hearty cooperation with representatives of the Federal Government in order that the desired end may be obtained at the earliest possible moment consistent with a wise administration of the affairs of the Nation and of the States.

In carrying out of all reclamation projects in which the Federal Government may become interested, its activities should ever be in conformity with the laws of the State in which the project under development is located. In the arid States of the West the irrigation by or with the aid of the Federal Government should in every instance be based upon a full compliance with the laws of the State wherein the projects are located so

far as the appropriation of water and other matters of purely State control are concerned.

On the 2d and 3d of April 1920, subsequent meetings of the league were held in Los Angeles, where further discussion was carried on and resolutions of a similar character were adopted. The league was growing rapidly in membership, the only requirement being a \$25 membership fee. Anyone who wished to could join and take out as many memberships as he desired.

About this time the people of Los Angeles were beginning to look around for a new source of water to supply their rapidly growing population, and the agitation began for a high dam on the Colorado River which might store a continuous supply of water for metropolitan Los Angeles and also diminish the flood danger in the Imperial Valley. This proposal intensified the upper basin States' fear that their future use of the Colorado water might be endangered.

On August 25-27, 1920, another meeting of the league was held in Denver, at which time the desirability of encouraging the construction of large reservoirs in the lower canyon of the Colorado River for purposes of flood control, power, and irrigation was discussed. At this meeting the Director of the Reclamation Service, Arthur Davis, assured the conference that the construction of reservoirs for pools to be impounded on the lower river need in no manner interfere with the future development of the upper reaches of the streams within the States of origin. It was at this meeting that the idea of an interstate compact was first suggested as a means of apportioning the waters of the Colorado. Credit for this suggestion is due to a subcommittee of the league, consisting of Mr. Delph Carpenter, of Colorado, and Mr. Sims Ely, of Arizona.

With the assurance by a representative of the Federal Government that there would be sufficient water for all needs, and after considering the additional safeguard of an interstate compact to protect their rights, the conference adopted the following resolutions:

Whereas it is the understanding of this league, from information presented by Hon. Arthur P. Davis, Director of the Reclamation Service, that the water supply of the Colorado River drainage basin is sufficient to supply the present and future necessities of all of the States whose territory is involved, and that all present and future interference with development upon or from the upper reaches of the stream would be avoided: Now, therefore, be it

Resolved, That the league favors the early development of all possible beneficial uses of waters of the stream upon the upper reaches of the stream and its tributaries along the lines set forth in the resolutions adopted at the Salt Lake conference of January 18-21, 1919, and that the present and future restrictions upon such development by withholding or conditional granting of applications for rights-of-way across public lands for irrigation works should be discontinued and that such ap-

plications should be granted with a degree of dispatch which will permit the construction of all such projects while financial and other means are at hand and opportunity for construction exists; be it further

Resolved, That it is the sense of this conference that the present and future rights of the several States whose territory is in whole or in part included within the drainage area of the Colorado River, and the rights of the United States, to the use and benefit of the waters of said stream and its tributaries *should be settled and determined by compact or agreement between said States and the United States with the consent of Congress, and that the legislatures of said States be requested to authorize the appointment of a commissioner for each of said States for the purpose of entering into such compact or agreement for subsequent ratification and approval by the legislature of each said State and the Congress of the United States. (Italics ours.)*

Pursuant to this resolution and at the request of the president of the league, bills were drawn and submitted to the legislatures of each of the seven States.

5. History of Legislation

Between February 22 and May 12, 1921, each of the State legislatures passed its respective bill authorizing a state commissioner. These bills provided for the appointment of a commissioner in each State by the Governor of the State for the purpose of formulating the compact or agreement. They also provided for a representative of the United States to act on behalf of the Federal Government in the formulation of the compact.

A commissioner was appointed in each of the States and on May 10, 1921, the Governors of the seven States or their representatives, met at Denver and there formulated a resolution calling upon the President and the Congress of the United States to provide for the appointment of a representative of the United States to help in the negotiations, and directed that the resolution be laid before the President and Congress by the Governors of the States.

On May 17, 1921, this resolution was presented by the Governors to the Secretary of the Interior and on the 19th day of May to the President of the United States. The bill authorizing a representative of the United States to meet with the State commissioners was passed by Congress 3 months later and was signed by the President August 19, 1921.³¹

³¹ The provisions and wording of the act as they bear upon the negotiation of the compact are important and hence are set forth herewith:

[Public No. 56, Sixty-seventh Congress, approved Aug. 19, 1921]

"An act to permit a compact or agreement between the States of Arizona, California, Colorado, Nevada, New Mexico, Utah, and Wyoming respecting the disposition and apportionment of the waters of the Colorado River, and for other purposes

"Whereas the Colorado River and its several tributaries rise within and flow through or from the boundaries between the States of Arizona, California, Colorado, Nevada, New Mexico, Utah, and Wyoming; and

"Whereas the territory included within the drainage area of said stream and its tributaries is largely arid and in small part irrigated, and

Pursuant to this act, President Harding, on December 17, 1921, appointed Herbert Hoover, then Secretary of Commerce, to represent the United States in the negotiations.

(a) *The Colorado River Commission.*—This commission, consisting of the representatives of the seven States and Mr. Herbert Hoover, who acted as chairman, met in Washington, D. C., January 26, 1922, to organize as a group and to plan their deliberations. Six more meetings were held in Washington during January, followed by a meeting in Phoenix, Ariz., on March 15 and a meeting in Denver, Colo., on April 1. At this last-mentioned meeting resolutions were adopted to the effect that each of the various commissioners was to submit to the secretary of the commission "suggested forms of compact for the disposition and apportionment of the waters of the Colorado River and its tributaries." These suggestions were to be considered at later meetings of the commission. Five of the commissioners (Arizona, Colorado, New Mexico, Utah, and Wyoming) suggested drafts for a compact; the representatives of California and Nevada made no proposals.

On November 9 meetings were resumed at Santa Fe, N. Mex., and continued until November 24, 1922, on which day the final draft of the compact was signed by each of the State commissioners and approved by Mr.

the present and future development necessities and the general welfare of each of the said States and of the United States require the further use of the waters of said streams for irrigation and other beneficial purposes and that future litigation and conflict respecting the use and distribution of said waters should be avoided and settled by compact between said States; and

"Whereas the said States by appropriate legislation have authorized the Governors thereof to appoint commissioners to represent said States for the purpose of entering into a compact or agreement between said States respecting the future utilization and disposition of the waters of the Colorado River and of the streams tributary thereto; and

"Whereas the Governors of said States have named and appointed their respective commissioners for the purpose aforesaid and have presented their resolution to the President of the United States requesting the appointment of a representative on behalf of the United States to participate in said negotiations and to represent the interests of the United States; Now, therefore

"Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That consent of Congress is hereby given to the States of Arizona, California, Colorado, Nevada, New Mexico, Utah, and Wyoming to negotiate and enter into a compact or agreement not later than January 1, 1923, providing for an equitable division and apportionment among said States of the water supply of the Colorado River and the streams tributary thereto, upon condition that a suitable person, who shall be appointed by the President of the United States, shall participate in said negotiations as a representative of and for the protection of the interests of the United States, and shall make a report to Congress of the proceedings and of any compact or agreement entered into, and the sum of \$10,000, or so much thereof as may be necessary, is hereby authorized to be appropriated to pay the salary and expenses of the representative of the United States appointed hereunder: *Provided*, * * * That any such compact or agreement shall not be binding or obligatory upon any of the parties thereto unless and until the same shall have been approved by the legislatures of each of the said States and by the Congress of the United States.

"SEC. 2. That the right to alter, amend, or repeal this act is hereby expressly reserved."

Hoover. Public hearings were held by the commission at various times in the States involved.

In accordance with the Federal act authorizing the compact, the commission at first attempted to make an apportionment of the waters of the Colorado and its tributaries among the various States. After considerable discussion, however, it was found impossible to come to any agreement on this basis, and, in order not to disband the commission prematurely, it was agreed that an apportionment should be made between the upper basin and the lower basin, the dividing point between the two basins being at Lee Ferry, which is at the head of the canyon area of the river and is a few miles south of the point at which the river crosses the Utah-Arizona line. This was the first of a long series of compromises which finally led to the completion of the compact and its signing on November 24, 1922, at Santa Fe, N. Mex.

(b) *The Colorado River Compact.*—The compact consists of a preamble, 11 articles, and the signatures of the various State commissioners and Mr. Hoover. The preamble notes the resolutions of the States to enter into a compact, cites the Federal authorization, and names the representatives.

The first major purpose,³² that of dividing and apportioning the use of the Colorado River water, is an outgrowth of the fear of some of the States that the more rapid development and extensive utilization in others would jeopardize the remaining States' rights and interests. The upper basin States could see that there might come a time when irrigation and other projects along the lower reaches of the river might use all or most of the water in the stream and that if this happened before appropriations had been made in the upper States, as it was very likely to do, the application of the prior appropriation doctrine of water rights might forbid any developments in the upper States.

The second major purpose, that of establishing the relative importance of the several beneficial uses of water, has a direct bearing on the manner in which developments on the river may proceed. In a later article of the compact it was decided that agricultural and domestic uses should have preference over power uses, which in turn should have preference over navigation uses.

³² Article 1 of the compact reads as follows:

"The major purposes of this compact are to provide for the equitable division and apportionment of the use of the waters of the Colorado River System; to establish the relative importance of different beneficial uses of water; to promote interstate comity; to remove causes of present and future controversies; and to secure the expeditious agricultural and industrial development of the Colorado River Basin, the storage of its waters, and the protection of life and property from floods. To these ends the Colorado River Basin is divided into two basins, and an apportionment of the use of part of the water of the Colorado River System is made to each of them with the provision that a further apportionment may be made."

The third and fourth major purposes of the compact may be grouped together. They provide for the promotion of interstate comity and for the removal of the causes of present and future controversies. In the light of these two purposes it is interesting to note that during the 13 years following the signing of the compact one State has refused to ratify the compact, and that the problems dealt with in the compact have been a continuous source of argument and litigation.

The last three major purposes, i. e., the expeditious agricultural and industrial development, the storage of water, and the protection from floods, suggest that the Colorado River Basin is a unified area for these purposes and that development in the area should proceed in accordance with a definite plan which would embrace the whole watershed.

The area included within the meaning of the terms upper and lower basins, which are the units considered in apportioning the water, theoretically covers all of the seven States, an area almost three times as large as the drainage basin itself.³³

It was necessary to include territory outside of the drainage basin so that transmountain diversions such as those to the Imperial Valley, and the metropolitan regions of Denver and Los Angeles could be included as coming within the scope of the compact. Parts of three States, namely, Arizona, New Mexico, and Utah, are included in both the upper and lower basins, although by specific provision Arizona is considered a State within the lower basin and the other two are considered as States of the upper basin. Thus, while the competition is mainly between the States of the

upper basin and the States of the lower basin, the apportionment of water divides these three States, and in the event of future arguments it may be that these three States will be divided in their sympathies for the two basins. The whole question of the area involved has a direct relation to the question of regional planning and development which will be considered later.

The third article is the most important one of the compact.³⁴ In its provisions the commission attempted to solve the principal problems which gave rise to the negotiations leading to the compact. In the first place, the necessity for the compact and for apportioning waters of the Colorado indicates that there was some doubt as to whether the Colorado and its tributaries would be able to satisfy all of the needs of the people it served. Mr. Norviel, the commissioner from Arizona, raised this question in the eleventh meeting of the commission: "If there is water enough for all, then why all of this division and this restriction upon the amount of the water flow?"³⁵

³⁴ Article III reads as follows:

"(a) There is hereby apportioned from the Colorado River System in perpetuity to the upper basin and to the lower basin, respectively, the exclusive beneficial consumptive use of 7,500,000 acre-feet of water per annum, which shall include all water necessary for the supply of any rights which may now exist.

"(b) In addition to the apportionment in paragraph (a), the lower basin is hereby given the right to increase its beneficial consumptive use of such waters by 1,000,000 acre-feet per annum.

"(c) If, as a matter of international comity, the United States of America shall hereafter recognize in the United States of Mexico any right to the use of any waters of the Colorado River System, such waters shall be supplied first from the waters which are surplus over and above the aggregate of the quantities specified in paragraphs (a) and (b); and if such surplus shall prove insufficient for this purpose, then the burden of such deficiency shall be equally borne by the upper basin and the lower basin, and whenever necessary the States of the upper basin shall deliver at Lee Ferry water to supply one-half of the deficiency so recognized in addition to that provided in paragraph (d).

"(d) The States of the upper division will not cause the flow of the river at Lee Ferry to be depleted below an aggregate of 75,000,000 acre-feet for any period of 10 consecutive years reckoned in continuing progressive series beginning with the 1st day of October next succeeding the ratification of this compact.

"(e) The States of the upper division shall not withhold water, and the States of the lower division shall not require the delivery of water, which cannot reasonably be applied to domestic and agricultural uses.

"(f) Further equitable apportionment of the beneficial uses of the waters of the Colorado River System unapportioned by paragraphs (a), (b), and (c) may be made in the manner provided in paragraph (g) at any time after October 1, 1963, if and when either basin shall have reached its total beneficial consumptive use as set out in paragraphs (a) and (b).

"(g) In the event of a desire for a further apportionment as provided in paragraph (f) any two signatory States, acting through their Governors, may give joint notice of such desire to the Governors of the other signatory States and to the President of the United States of America, and it shall be the duty of the Governors of the signatory States and of the President of the United States of America forthwith to appoint representatives, whose duty it shall be to divide and apportion equitably between the upper basin and the lower basin the beneficial use of the unapportioned water of the Colorado River System as mentioned in paragraph (f), subject to the legislative ratification of the signatory States and the Congress of the United States of America."

³⁵ Colorado River Commission, minutes of the eleventh meeting, Bishop's Lodge, Santa Fe, Saturday, 10 a. m., Nov. 11, 1922.

³³ Article II provides that:

"As used in this compact:

"(a) The term 'Colorado River System' means that portion of the Colorado River and its tributaries within the United States of America.

"(b) The term 'Colorado River Basin' means all of the drainage area of the Colorado River System and all other territory within the United States of America to which the waters of the Colorado River System shall be beneficially applied.

"(c) The term 'States of the upper division' means the States of Colorado, New Mexico, Utah, and Wyoming.

"(d) The term 'States of the lower division' means the States of Arizona, California, and Nevada.

"(e) The term 'Lee Ferry' means a point on the main stream of the Colorado River 1 mile below the mouth of the Paria River.

"(f) The term 'upper basin' means those parts of the States of Arizona, Colorado, New Mexico, Utah, and Wyoming within the upper United States of America to which the waters of the Colorado River System above Lee Ferry, and also parts of said States now located without the drainage area of the Colorado River System which are now, or shall hereafter be, beneficially served by waters diverted from the system above Lee Ferry.

"(g) The term 'lower basin' means those parts of the States of Arizona, California, Nevada, New Mexico, and Utah within and from which waters naturally drain into the Colorado River System below Lee Ferry, and also all parts of said States located without the drainage area of the Colorado River System which are now, or shall hereafter be, beneficially served by the waters diverted from the system below Lee Ferry.

"(h) The term 'domestic use' shall include the use of water for household, stock, municipal, mining, milling, industrial, and other like purposes, but shall exclude the generation of electrical power."

There were several conflicting opinions on this question. The uncertainty was based upon two considerations. There had never been sufficiently adequate measurements of the flow of the river over a long enough period to ascertain exactly how much water flowed in the river. In the second place, there was no way of determining the amount of water that might be needed to satisfy future irrigation and other diversion projects.

Mr. A. P. Davis, director and chief engineer of the Reclamation Service, had asserted that there was sufficient water to meet all needs. At the first meeting of the commission in Washington he confirmed this opinion. Others who held the same view included Mr. Hoover, chairman of the commission, and Mr. Harry Chandler, owner of land in Mexico which was watered by the Colorado River.

Mr. E. C. LaRue is the first authority who may be cited on the other side of the issue. As early as 1916 he said, "Evidently the flow of the Colorado River and its tributaries is not sufficient to irrigate all of the irrigable lands lying within the basin."³⁶

Dr. Elwood Mead, Commissioner of the Bureau of Reclamation, pointed out that an acute water shortage had occurred in the Imperial Valley in 1922, which resulted in a "very serious loss to the Valley."³⁷

The issue was not finally resolved in the committee's deliberations, nor has it been satisfactorily answered since. The weight of evidence seemed to indicate, however, that the low water flow of dry years might easily produce a serious shortage unless storage facilities were provided to catch the surplus of wet years and thereby even the flow.

The first paragraph of article III makes an apportionment of the water between the upper and lower basins. In answering a question as to why this was done Mr. Hoover said, "The commission, upon analysis, found the causes of present friction and of major future disputes lay between the lower basin States and the upper basin States, and that very little likelihood of friction lay between the States within each basin; that the delays to development at the present time are wholly interbasinal disputes; and that major development is not likely to be impeded by disputes between the States within each basin."³⁸

Inasmuch as the original idea of the compact is credited to representatives of the upper States, the first

part of this quotation has some foundation. However, it has already been pointed out that three of the States were included in both the upper and the lower basins and there was no dispute within any of these States. Also the statement that "very little likelihood of friction lay between the States within each basin" seems to have been a rather short-sighted appraisal of the situation, in view of the fact that Arizona has been continually at swords points with California regarding their respective rights within the lower basin ever since the compact was signed, has consistently refused to ratify the compact, and has on two occasions brought suit against California in the Supreme Court of the United States regarding their water rights.

In the light of all subsequent events it appears that the division of water between the basins instead of between States was a last resort after the States found themselves incapable of arriving at a mutual agreement. The decision merely put off until a later date the vital question of the rights of the individual States. The inability to solve this problem, which was the original problem contemplated by the act of Congress authorizing the compact, throws some doubt upon the possibility of solving such problems as the apportionment of water between States by the interstate compact method. Indeed, the failure of many subsequent efforts of the States of the lower basin to agree among themselves serves to strengthen this doubt. The time has not yet come for an apportionment between the States of the upper basin, although there have been some negotiations along that line. Whether an agreement can be reached by mutual consent of the States involved remains to be seen.

The 7,500,000 acre-feet³⁹ apportioned to each of the basins per annum was a compromise reached after a long debate. The basis for this decision was the testimony of Mr. A. P. Davis to the effect that the total annual flow at Lee Ferry averaged approximately 16,400,000 acre-feet, which on a 50-50 basis would give each of the basins 8,200,000 acre-feet per annum. The upper river States made a counterproposal that the figure be set at 6,500,000. The 7,500,000 acre-feet basis was the final compromise.

In connection with this stipulation of paragraph (a) the provisions of paragraph (d) should be considered. It is here provided that the upper basin shall allow 75,000,000 acre-feet to flow through Lee Ferry during each 10-year period. In some years there would be water greatly in excess of 7,500,000 acre-feet, and in some years probably less than that amount. If 7,500,000 acre-feet had to be let down by the upper basin

³⁶ U. S. G. S. Water Supply Paper 395, page 167.

³⁷ Cf. Olsen, Reuel; "The Colorado River Compact", p. 25.

³⁸ In a letter to Mr. Hoover, Representative Hayden, of Arizona, asked a series of 26 questions regarding the compact, for the benefit of the Arizona Legislature, which was considering the ratification of the compact. Mr. Hoover answered these questions through Mr. Stetson, secretary of the Colorado River Commission, in a letter dated Jan. 21, 1923.

³⁹ An acre-foot of water is the amount necessary to cover an acre of ground to a depth of 1 foot.

each year, there would have to be constructed large storage reservoirs in the upper basin in order to average the flow. This provision puts the burden of providing storage facilities on the lower basin if an even flow there is desired. This compromise may be regarded as a victory for the upper-basin States, inasmuch as Mr. Norviel, of Arizona, had kept insisting that at least a minimal annual flow at Lee Ferry should be guaranteed.

The term "beneficial consumptive use", used in paragraph (a), is a very important one. It has been described by Mr. Carpenter as follows:⁴⁰

"The term 'beneficial consumptive use' is to be distinguished from the amounts diverted from the river. It does not mean headgate diversions. It means the amount of water consumed and lost to the river during uses of the water diverted. Generally speaking, it is the difference between the aggregate diverted and the aggregate return flow. It is the net loss occurring through beneficial uses. The apportionment of 7,500,000 acre-feet exclusive annual beneficial consumptive use to the upper basin means that the upper basin may exhaust that much water from the flow of the stream each year. The aggregate annual diversions in the upper basin are unlimited. The limitation applies only to the amount consumed, and all waters which return to the stream are not consumed."

The report of Frank C. Emerson, commissioner, to the Governor of Wyoming, substantiates this view:⁴¹

"The upper States will have the privilege of once diverting all of the over 18,000,000 acre-feet of water supplied by the upper basin, and the return flow alone from this amount will provide the entire delivery at Lee Ferry; * * *."

From these explanations of the term it will be seen that the upper basin may use considerably more than the 7,500,000 acre-feet apportioned it and still satisfy the compact provisions that 75,000,000 acre-feet must be let down each 10 years. If this construction is placed on the use of water in the lower basin, a curious situation results. It is conceivable that water users may divert any amount of water they wish from the river below Lee Ferry and if all but 7,500,000 acre-feet is returned to the river, even though it flow unused down the river to the Gulf of Mexico, the compact will be satisfied. In this case the lower basin might build up prior rights to an amount greatly in excess of the 7,500,000 acre-feet. It is difficult to imagine what interpretation would be put on this provision of the compact if such a situation arose.

Paragraph (b) of article III, permitting the lower basin to increase its beneficial consumptive use by 1,000,000 acre-feet per annum, seems to be the result of Mr. Norviel's insistence that the Gila River, a tributary of the Colorado flowing through Arizona, constituted a distinct problem in itself. Although no mention is made of the Gila River in the compact, this extra 1,000,000 acre-feet seems to be based on it.⁴² At the time the compact was formed the water of the Gila was in large part already used, and as the apportionments of the water included water in all of the tributaries of the Colorado as well as that of the main stream, Norviel held out for this addition. His contention was so strong that the upper basin States finally gave in.

Paragraph (c) merely indicates that the Commission had considered the Mexican problem, without attempting to come to any decision regarding Mexico's rights to water from the Colorado River. There was a good deal of discussion of the Mexican situation in the meetings of the Commission, but it was thought that the problem was one which could not be dealt with there. Mr. Hoover's explanation in the letter referred to, *supra*, is, "It (par. (c)) recognizes the possibility that a treaty may, at some time, be made and that under it Mexico may become entitled to the use of some water, and divides the burden in such an event, but the quantity to which that country may become entitled and the manner, terms, and conditions upon which such use may depend, cannot be foreseen." The rights of Mexico are still an important factor in the final solution of Colorado River problems.

Paragraphs (f) and (g) provide for a further consideration of the apportionment of Colorado River water at any time after October 1, 1963. This future apportionment is to be decided by a commission such as the original Colorado River Commission, subject to the ratification of the State legislatures and the Federal Congress. The upper States, believing that they had driven a good bargain, wanted to put the date for later consideration even further into the future.⁴³ However, Commissioner Norviel insisted upon a shorter period, and the date decided on was another compromise. It was obvious that no one knew just how soon the need for subsequent negotiations would arise, and it is possible that no particular time should have been set. However, the question left until 1963 was only that of subsequent division between the two basins, provisions having been made for division within each basin when the need arose.

⁴⁰ Report of Delph E. Carpenter, commissioner, of Colorado, to Gov. Oliver H. Shoup, of Colorado, Dec. 15, 1922.

⁴¹ Report of Frank C. Emerson, commissioner for the State of Wyoming in re Colorado River compact, January 18, 1923.

⁴² Minutes of meetings of the commission. See also report of Colorado River Commission of Arizona, May 3, 1935, p. 5.

⁴³ Colorado River Commission, Minutes of Eighteenth Meeting, Bishop's Lodge, Santa Fe, Nov. 16, 1922, pp. 52-7.

The provisions of article IV are self-explanatory.⁴⁴ The section represents the views of the commissioners as to the relative importance of the various uses of water, with particular reference to the Colorado River. It might be noted here that the Boulder Canyon Project Act, which constituted the final ratification of this compact and authorized the construction of Boulder Dam, had as one of its major purposes the improvement of navigation, and that purpose was later held by the Supreme Court to be a valid one in authorizing the construction of Boulder Dam. The Boulder Act also provided that no construction was to begin until the Secretary of the Interior had made contracts for the sale of water and power which would insure the repayment of the cost of construction, operation, and maintenance of the project. In other words, it is permissible to state that navigation is subservient to other purposes, and then undertake a large construction, irrigation, and power project based on the constitutional ground of improving navigation. The act also provided that electrical power development should be subservient to agricultural and domestic uses and required that flood control and irrigation costs should be repaid from revenues derived largely from the sale of power.

Article V of the compact provided that:

The chief official of each signatory State charged with the administration of water rights, together with the Director of the United States Reclamation Service and the Director of the United States Geological Survey, shall cooperate, *ex officio*:

(a) To promote the systematic determination and coordination of the facts as to flow, appropriation, consumption, and use of water in the Colorado River Basin, and the interchange of available information in such matters.

(b) To secure the ascertainment and publication of the annual flow of the Colorado River at Lee Ferry.

(c) To perform such other duties as may be assigned by mutual consent of the signatories from time to time.

The idea back of this article is a commendable one. However, it may be argued that it did not go far enough. There was no provision made as to the final responsibility for obtaining and assembling the information called for. Was it the responsibility of the States or of the Federal Government? No provision

was made for the planning of future developments of the river and its tributaries as a result of the information collected. Thus far no additional duties have been assigned in accordance with paragraph (c) of this article.

The sixth article of the compact is peculiarly important from the standpoint of our examination inasmuch as it provided the instrumentation for settling disagreements and for solving problems which might later arise. The method decided upon was the appointment of commissioners, with power to examine and adjust claims and controversies, whenever such action was desired by the Governor of any State. However, every decision of the commissioners must be ratified by the legislatures of the States affected.⁴⁵

So many futile conferences have been held regarding the controversies between Arizona and California and other States, in accordance with the method outlined in this article, that serious question arises as to the adequacy of the machinery. However, it should be stated again that the compact failed to make an allocation as between individual States, the task which was before it, and left the problem for future debate. Innumerable conferences have been held between representatives of the various States; two recourses to the Supreme Court have been made; in two instances the State militia has been called out to halt progress of a construction project of the Federal Government; and still the relative rights of the various States are an unknown quantity.

The provisions of the remaining five articles may be summarized and passed over with little or no comment. Article VII states that nothing in the compact shall be construed as affecting the obligations of the United States to Indian tribes. The next section was inserted in order to protect prior appropriation rights which had already become vested; in the hearings it was brought out that the low-water flow of the river was already used in its entirety by parties in California and Arizona. Article IX safeguards the right of each State to seek legal and equitable remedies in courts of law.

⁴⁴ Art. IV provides as follows:

(a) Inasmuch as the Colorado River has ceased to be navigable for commerce and the reservation of its waters for navigation would seriously limit the development of its basin, the use of its waters for purposes of navigation shall be subservient to the uses of such waters for domestic, agricultural, and power purposes. If the Congress shall not consent to this paragraph, the other provisions of this compact shall nevertheless remain binding.

(b) Subject to the provisions of this compact, water of the Colorado River system may be impounded and used for the generation of electrical power, but such impounding and use shall be subservient to the use and consumption of such water for agricultural and domestic purposes and shall not interfere with or prevent the use for such dominant purposes.

(c) The provisions of this article shall not apply to or interfere with the regulation and control by any State within its boundaries of the appropriation, use, and distribution of water.

⁴⁵ The whole of art. VI reads as follows:

"Should any claim or controversy arise between any two or more of the signatory States (a) with respect to the waters of the Colorado River system not covered by the terms of this compact; (b) over the meaning or performance of any of the terms of this compact; (c) as to the allocation of the burdens incident to the performance of any article of this compact or the delivery of waters as herein provided; (d) as to the construction or operation of works within the Colorado River Basin to be situated in two or more States, or to be constructed in one State for the benefit of another State; or (e) as to the diversion of water in one State for the benefit of another State; the Governors of the States affected, upon the request of one of them, shall forthwith appoint commissioners with power to consider and adjust such claim or controversy, subject to ratification of the legislatures of the States so affected. Nothing herein contained shall prevent the adjustment of any such claim or controversy by any present method or by direct future legislative action of the interested States."

The following provision deals with the important matter of termination, stipulating that the unanimous action of the signatory States may accomplish this result at any time, providing, however, that all rights established by the compact shall continue unimpaired. Finally a concluding article sets forth the customary steps which are necessary before the compact goes into effect.⁴⁶

(c) *Ratification of the compact.*—During the year 1923 each of the legislatures of the signatory States, except Arizona, ratified the compact as it was originally signed. For some years pressure was put on the State of Arizona to ratify the compact, but to no avail. During the year 1925 an effort was made to make the compact effective with only six States ratifying. A bill, one of the original Boulder Dam bills, was introduced into Congress which included the provision that if six States ratified the compact and agreed that the clause of the compact requiring the ratification of seven States would be waived, the compact would become effective. Congress failed to pass the Boulder Dam bill at this time, but the movement had started which eventually secured the ratification of the compact without Arizona's adherence. In 1925 the legislatures of Colorado, Nevada, New Mexico, and Wyoming ratified the six-State compact. In 1925 California passed the Finney resolution which constituted a ratification of the six-State compact, upon condition that the United States Government would construct at or below Boulder Canyon a storage dam of a capacity of not less than 20,000,000 acre-feet of water. The final Boulder Dam bill was approved in December 1928. This bill also contained the approval of the six-State compact, providing that California should be 1 of the 6 States, and also providing that California should enact legislation limiting its future use of Colorado River water apportioned under III (a) of the compact to 4,400,000 acre-feet. On March 4, 1929, after the Boulder Dam had been authorized by Congress, the California Legislature passed an unconditional ratification of the six-State compact and also passed a bill limiting its use of water as described above. On March 6, 1929, Utah finally ratified the six-State compact and all conditions necessary to make the six-State compact effective were satisfied. On the 25th of June 1929, Herbert Hoover, then President of the United States, issued a proclamation

making the Boulder Canyon Project Act and the six-State Colorado River compact effective. Thus more than 8 years after the first steps were taken to initiate the compact it finally came into being.

6. Attitudes of the States

(a) *Compromise.*—As the discussion of the compact itself has indicated, almost each and every provision was finally worded as a compromise between seriously conflicting interests, the final result being somewhat unsatisfactory to all parties. The real compromise was between the interested groups in Southern California and those in the upper basin States. The agricultural group in the Imperial and Coachella Valleys in California were in need of flood control and an equalized flow of the river. The metropolitan area of Los Angeles needed a new supply of water for domestic purposes and power for pumping that water to the Pacific Coast. A large power and storage dam near Boulder Canyon would satisfy both the agricultural and the metropolitan groups. The prospect of this enormous increase in the use of the Colorado River water in the lower basin alarmed the upper basin States. In order to obtain support in Washington from the upper basin States, thereby making it possible to put through a Boulder Dam bill, the California group were ready to make some concessions. These negotiations have been described in the preceding pages in connection with the various legislative enactments by the State legislatures and Congress.

Arizona was brought into the picture because of her physical location in relation to the Colorado River and because of the State's desire to protect its future rights to the use of Colorado River water.

(b) *Arizona's contentions.*—Arizona was in somewhat the same predicament as the upper-basin States when this question of water rights arose. Lacking the finances of more prosperous States, she was not in a position to develop irrigation projects as quickly as California and hence was apprehensive lest the more rapid development of California should acquire prior rights to water which Arizona might desire at some time in the future. She felt that the compact did not protect her rights and hesitated to ratify the compact until some agreement could be made between the States in the lower basin. Numerous conferences have been held by representatives of California, Arizona, and Nevada in an effort to come to a mutual agreement. At some of these meetings representatives of the upper-basin States have sat in. Indeed, on more than one occasion a conference has been called by a representative or an official of one of the upper-basin States for the sole purpose of bringing about some agreement be-

⁴⁶ The pertinent provisions specify that:

Aar. XI. This compact shall become binding and obligatory when it shall have been approved by the legislature of each of the signatory States and by the Congress of the United States.

Notice of the approval of the legislature shall be given by the Governor of each signatory State to the Governors of the other signatory States and to the President of the United States, and the President of the United States is requested to give notice to the Governors of the signatory States of approval by the Congress of the United States.

tween the lower-basin States. Arizona has proposed apportionments to California, and California has proposed apportionments to Arizona, but in no case have the two States been willing to accept the same apportionment.

When in 1927 the Boulder Dam Act came up for discussion in the Senate, Arizona asked that the bill be allowed to go over until the next session; this was done, pending further efforts of Arizona and California to adjust their differences. In order to start the ball rolling, Arizona requested Gov. William H. Adams, of Colorado, to call a meeting of the various States. This conference was convened from August 22 to September 1, and from September 19 to October 4, 1927; the Governors of the seven river States met at Denver. The Colorado River Commissions of Arizona, California, and Nevada and the water commissioners of the other States were also there. Governor Dern, of Utah, was selected as chairman. After various points of view were expressed, the Governors of the upper basin States conferred and made the following recommendation:

Suggested basis of division of water between the States of the lower division of the Colorado River system, submitted by the Governors of the States of the upper division, August 30, 1927.

The Governors of the States of the upper division of the Colorado River system, suggest the following as a fair apportionment of water between the States of the lower division, subject and subordinate to the provisions of the Colorado River compact.

1. Of the average annual delivery of water to be provided by States of the upper division at Lee Ferry under the terms of the Colorado River compact:

	<i>Acre-feet</i>
(a) To the State of Nevada.....	300,000
(b) To the State of Arizona.....	3,000,000
(c) To the State of California.....	4,200,000

2. To Arizona, in addition to water apportioned in subdivision (b), 1,000,000 acre-feet of water, to be supplied from the tributaries of the Colorado River flowing in said State and to be diverted from said tributaries before the same empty into the main stream. Said 1,000,000 acre-feet shall not be subject to diminution by reason of any treaty with the United States of Mexico, except in such proportion as the said 1,000,000 acre-feet shall bear to the entire apportionment in (1) and (2) of 8,500,000 acre-feet.

3. As to all water of tributaries of the Colorado River emptying into the river below Lee Ferry not apportioned in paragraph (2), each of the States of the lower basin shall have the exclusive beneficial consumptive use of such tributaries within its boundaries, before the same empty into the main stream—provided the apportionment of the waters of such tributaries situated in more than one State shall be left to adjudication or apportionment between said States in such manner as may be determined upon by the States affected thereby.

4. The several foregoing apportionments to include all water necessary for the supply of any rights which may now exist, including water for Indian lands in each of the said States.

5. Arizona and California each may divert and use one-half of the unapportioned waters of the main Colorado River flowing below Lee Ferry, subject to future equitable apportionment between the said States after the year 1963, and on specific condition that the use of said waters between the States of the lower basin shall be without prejudice to the right of the States of the upper basin to further apportionment of water, as provided by the Colorado River compact.

This recommendation was accepted by the representatives of Arizona but refused by the representatives of California. The Boulder Canyon Project Act, passed the next year, accepted this proposal of the Governors, except as to tributaries and except that it took 200,000 acre-feet from Arizona's share and added it to California's. The act also authorized the States of Arizona, Nevada, and California to enter into an agreement apportioning the water in the lower basin according to these figures and provisions.

After Congress had enacted the Boulder Dam Act steps were taken by Arizona to enjoin "the building of the Hoover Dam, as it was then called. The defendants, the six other States and the Secretary of the Interior, moved to dismiss the bill and on May 16, 1931, this motion was granted. The Supreme Court held, in the words of Justice Brandeis, that it was not necessary for the United States to conform to the "police regulations" of the State of Arizona; that Congress could build the dam without the consent of Arizona; that the Colorado was a navigable stream at Black Canyon where the dam was to be built (this in spite of the fact that the Congress of the United States has approved the Colorado River compact which declared that the Colorado had ceased to be navigable for commerce); that the dam would improve navigation; that there was no conflict between the building of the dam to improve navigation and the Colorado River compact; that Arizona was not bound by the terms of the compact and could remain an appropriation State and therefore could not be injured; and that in dismissing the bill it did so without prejudice to Arizona's right to seek relief in the Supreme Court in case the stored waters in the Boulder Dam were used in such a way as to interfere with the perfected rights in Arizona or her rights to make additional legal appropriations out of the river.

The Secretary of the Interior under President Hoover, R. L. Wilbur, tendered Arizona a contract for water stored, or to be stored, at Boulder Dam. Mr. Wilbur's assistant, Mr. Ely, met with representatives of Arizona in the spring of 1933 to discuss amendments to the proposed contract. However, there was not sufficient time to complete the negotiations before the advent of the Roosevelt administration and the matter was dropped for the time being.

"This action resulted in the leading case of *Arizona v. California*, 283 U. S. 423 (1931).

On November 10, 1934, Gov. B. B. Moeur, of Arizona, declared martial law at the place at which the Parker diversion dam was being built on the Colorado River for the purpose, among many others, of supplying the metropolitan water district with water for its long aqueduct. In February 1935, the Supreme Court issued a temporary injunction restraining Arizona from interfering with the building of the dam. However, after argument the Court, on April 29, 1935, refused to grant a permanent injunction on the grounds that the Parker Dam had not been specifically authorized by Congress or by the President of the United States.⁴⁸ Work had been halted on the project at the time of the declaration of martial law by the Governor of Arizona. A bill passed by the Seventy-fourth Congress, and signed by the President on August 31, 1935, carried a specific authorization for the construction of Parker Dam, and the Secretary of the Interior, Harold L. Ickes, issued an order to resume construction the same day.

At a meeting on December 17, 1934, Secretary Ickes made a suggestion that conferences be held to work out a contract for the delivery of water to Arizona. Conferences were held in Phoenix, Ariz., on January 14 and 15, 1935, and in Salt Lake City February 25 to March 1, 1935. A contract was drawn up and submitted to Arizona, but has not as yet been accepted.

Arizona has never claimed that she did not have sufficient water for all of her present uses, the main problem being the ascertainment of future rights. California has already contracted for 5,362,000 acre-feet of water from the Colorado River for domestic and irrigation purposes, and Arizona declares that this is in violation of the Boulder Canyon Project Act and the legislative enactments of California which limited her use of such water.

In a report of the Colorado River Commission of Arizona, dated May 3, 1935, the present attitude and future policy of Arizona is clearly outlined as follows:

Your commission is convinced that it will be impossible to arrive at an agreement respecting the division of waters of the river between the States of Arizona, California, and Nevada. California will not accept the water division as set out in the Project Act; furthermore, that State will not agree to any contract for water between the Secretary and Arizona. When the Honorable Harold L. Ickes, on December 17, 1934, directed Arizona and other compact States to agree on the form of a contract, he was asking the impossible. True, Arizona could agree with Wyoming, Colorado, Utah, and New Mexico, *but the differences between Arizona and California are fundamental and cannot be adjusted by agreement.* (Italics ours.)

California already has contracted for 962,000 acre-feet of water annually in excess of that which she has limited herself by law to take. The other compact States and the Secre-

tary have acquiesced in granting this excess amount of water to California.

Your commission believes that Arizona's policy should be as follows:

First. This State and all of its departments approve the Parker-Gila irrigation project and bend every endeavor to have the first unit of that project, which is described in the Preston report, forthwith begun.

Second. That the Arizona congressional delegation be requested to provide for legislation which will make effective those provisions which are set out in section 4a of the Boulder Canyon Project Act with respect to the allocation of water.

Third. That legal steps be taken by Arizona to compel the limitation of the use of water by California as set out in the Boulder Canyon Project Act and in California's legislative acceptance thereof.

Fourth. That this State continue to oppose any further construction of work in the Colorado River below the Boulder Dam until the water question has been decided.

Fifth. That this State adopt the Santa Fe compact (Colorado River compact) if anywhere there is assured to this State by congressional Federal legislation, or otherwise, its share in the Colorado River water.

Sixth. If the solution cannot be had through agreement or congressional act, which will soon be known, Arizona, by appropriate proceedings, should ask the Supreme Court of the United States for an equitable apportionment of the waters of the Colorado River.

Conclusion. Arizona's stake in the Colorado River and its proper development is of incalculable value. Her future growth is inextricably involved therein. No other single problem confronting our State is comparable to this.

In the first place, Arizona sought to obtain a large amount of revenue from the sale of Boulder Dam water and power, basing her claim on the fact that she owned that half of the bed of the stream on the Arizona side of the river and thereby the water. If this contention had been upheld the revenues thus derived would have become a great financial boon to the State. The present attitude in the State is that Arizona should make no commitments regarding what it will accept until its future needs are more definitely determined. In the case of a possible future shortage of water there is a fear that Arizona may lack water even for necessary domestic purposes. There is also a feeling that California has been more favored in obtaining Federal help for its projects. It does not seem likely that Arizona will be able to resolve her difficulties without recourse to the Supreme Court. In such an event it is impossible to say at present whether her past and present policy has been to her advantage or not.

(c) *California and Nevada.*—Apart from Arizona the only possible uses for Boulder Dam water in the lower basin are in Nevada and California. It has been assumed⁴⁹ for some time that Nevada's uses would never exceed 300,000 acre-feet. However, as of January

⁴⁸ 55 Sup. Ct. Reporter 666 (May 15, 1935).

⁴⁹ Boulder Canyon Project Act and proposal of the governors of the upper basin States, Aug. 30, 1927.

1935, Nevada has demanded 1,000,000 acre-feet for use in that State. There is no assurance that additional demands will not be made from time to time until some final settlement in the lower basin is arranged.

Because of its financial ability to go ahead with construction and irrigation projects, California has not been a prime mover in the controversies of the lower basin. By law she has limited herself to 4,400,000 acre-feet plus one-half of any excess over the 7,500,000 allocated to the lower basin. Contracts already signed between the Federal Government and California users call for 962,000 acre-feet which must come out of this surplus. The Colorado River Commission of California has estimated that there will be a total of 11,600,000 acre-feet available to the lower basin and proposes the following division:

III (a) Water (7,500,000 acre-feet):	
Arizona -----	2,800,000
California -----	4,400,000
Nevada -----	300,000
	<hr/> 7,500,000 <hr/>
Surplus (4,100,000 acre-feet):	
Arizona -----	2,050,000
California -----	2,050,000
Nevada -----	0
	<hr/> 4,100,000 <hr/>
Total by States (deducting present uses in Mexico, one-half from Arizona and one-half from California):	
Arizona -----	4,475,000
California -----	6,075,000
Nevada -----	300,000
Mexico -----	750,000
	<hr/> 11,600,000 <hr/>

These estimates were made prior to Nevada's recent demand for 1,000,000 acre-feet and also prior to the Debler report⁵⁰ which estimated the total water available at a figure 631,000 acre-feet less than this California estimate. The final solution to the problem is not now in sight.

(d) *The upper basin States.*—No serious conflict has arisen since the signing of the compact between the various upper basin States themselves or between them and the lower basin States. There have been attempts to provide for a division of water within the upper basin, but it is thought by some of the States that there is not yet sufficient knowledge regarding possible future developments and needs for water in order to arrive at an equitable division. Most of the water of the Colorado originates in the upper basin. Thus

these States are in the favorable position of diverting it before it reaches the lower basin. By the compact they are required to let down at Lee Ferry 75,000,000 acre-feet in each 10-year period. If during the ninth year of some 10-year period it became obvious that the 10-year amount would not be forthcoming, where would the responsibility lie? Or if the lower basin should divert more than it is allowed by the compact, will the compact or the appropriation doctrine prevail? Who will enforce the compact? These are problems which have not yet arisen but may in the future and will call for a new period of negotiation, probably reverting to a discussion of the entire problem of the Colorado River anew.

7. The Compact Method Considered Generally

The history and experience of the Colorado River compact have a bearing on the broader evaluation of the interstate compact as a method of solving regional or interstate problems. The commissioners were charged at the beginning with making an apportionment between the seven States of the waters of the Colorado River and its tributaries, and of allocating so much to this State, so much to that. The compact, when signed and ratified, was to endure for a relatively long period of years. When the commissioners first met there were two factors which practically precluded any final and mutual agreement. None of the seven States knew or was willing to say with any degree of exactness what its future needs would be; the use of the water for irrigation and other purposes depended upon so many unknown quantities, such as population trends, financial ability, demand for agricultural products, and future policies of the Federal Government, that it was impossible to gage the probable demands for water. In the second place, each State, naturally enough, desired to drive the most favorable bargain that it was possible to make. These two factors—lack of information and natural rivalry—were dominant in the deliberations of the commission.

The seven major purposes of the compact are:

- (1) To provide for an equitable apportionment of the use of the waters of the Colorado River system.
- (2) To establish the relative importance of different beneficial uses of water.
- (3) To promote interstate comity.
- (4) To remove causes of present and future controversies.
- (5) To secure the expeditious agricultural and industrial development of the Colorado River Basin.
- (6) To store water for use as needed.
- (7) To protect life and property from floods.

⁵⁰ Mimeographed report of the Bureau of Reclamation, December 1934.

With reference to the first purpose, an apportionment was made; not the original one intended, but a substitute and compromise one. The Colorado River compact has not accomplished its original and indispensable purpose, namely, the division of water between each of the several States. It may even be said that the basic controversies appear to be no nearer solution than if the compact had never been formulated. Moreover in the case of the Arizona-California disagreement, deep-seated conflicts seem to have been kindled. Of course, these disagreements undoubtedly would have come out, anyway, so that instead of being the cause, the compact has merely brought them to the surface and has hastened the acute stage of the conflict.

As for the second purpose, a statement was agreed upon in the compact listing in order of priority the various uses of water, as follows:

- a. Agricultural and domestic purposes.
- b. Power purposes.
- c. Navigation purposes.

It should be remembered that these various purposes are not only relative to each other, but that they are relative to the particular situation or condition existing in the Nation and the region at a given time. It may easily be that within the period during which this compact is in force the order of importance of these uses of water will shift. At the present time, for example, it is a major national policy to retire submarginal lands from agricultural use and to restrict the amount of productive acreage to be planted.

The fifth purpose, namely, "the expeditious agricultural and industrial development of the Colorado River Basin" sounds like a very promising one—it would seem to contemplate regional planning. In fact, however, the compact made no provision for instrumenting this objective. All that has been done along this line is the projection of basic resource studies,

which are being conducted by the Bureau of Reclamation; as has been pointed out, moreover, these studies were provided for in the Boulder Canyon Project Act rather than in the compact itself. The same thing is true of the storage and flood-control purposes. The only concrete action along these lines has resulted from the Boulder Dam project.

The only matter really provided for by the compact was the protection of one group of States from future encroachments by the citizens of another group of States, the rivalry between the individual States itself being intensified.

The Colorado River compact has disappointed the proponents of the compact method. Are there peculiar circumstances which have limited the effectiveness of this particular compact, or is the interstate compact an unreliable instrument for planning and development? Perhaps if only two States had been involved an agreement could have been accomplished. It would be difficult to argue that a different group of commissioners might have been more successful, in view of the fact that more than 100 of the leading citizens of the 7 States have had a hand in trying to effectuate an agreement. So far as the compact method as applied to this particular case is concerned, it may be said that in the first place it is an impossible method when, as in this instance, the compacting parties cannot come to an agreement. It is impractical when there is not sufficient knowledge at hand on which to base decisions. It is also impractical when the subject of the compact is so related to extraneous factors that the problem requires a continuous consideration in light of the changing conditions of the area involved. It is an impractical method when its purpose is to encourage the development of an area and the compacting parties are unwilling to relinquish to an agency of the compact that authority necessary to accomplish the purpose.

CHAPTER VIII. FEDERAL DEPARTMENTAL PROCEDURE

As outlined in chapter V of this report, the departments and bureaus of the Federal Government have felt the incidence of many aspects of the regional problem. In this chapter, their attempts at solution are briefly reviewed and analyzed. An examination of the matter suggests that regional planning and development might conceivably be handled entirely through existing administrative channels of the Federal Government, but this would entail a degree of centralization which would seem far from desirable.

In any planned national program, however, there will be many planning problems which can best be dealt with by the already established Federal departments and special agencies. In the event that a regional approach to such a program may be used, there will be necessary some coincidence in field activity on the part of those Federal administrative units involved. At the very outset then, there is clearly needed a survey of Federal departmental procedure which will show the extent to which the regional problem has already impinged upon administration, and which will reveal the methods employed for its solution. In addition, there is needed a total picture of the vested interests in departmental regional organization, because this is the background upon which any proposals for national regional planning will have to be cast.

1. The Survey

A survey, covering the period from November 1934 to February 1935,⁵¹ was accordingly made of all Federal agencies represented in Washington. In June 1935 the data assembled during this survey were revised as of that date.

The survey was directed toward answering the following questions: (1) What Federal agencies have adopted regions or districts for administering their functions in the field; (2) are there organizational principles which have been followed in these regional schemes, e. g., over how large a territory can a regional office carry on its activities, how many regional offices can Washington easily supervise, of what importance are State lines in drawing regional boundaries, and what methods have been used in regional subdivision? (3) Is there a general pattern of regional boundaries and regional headquarters used by the Federal field services?

⁵¹ Survey made by Dr. James W. Fester, fellow of the Brookings Institution. In April 1935 Dr. Fester was appointed to the staff of the National Resources Board, as an assistant political scientist.

The survey shows that regions have been adopted in Federal administrative procedure for some three reasons: (1) To facilitate Federal administration; (2) for planning and program-making; and (3) for decentralizing control.

2. Regional Organization for Administration

Approximately 74 Federal agencies, of bureau status or higher, have designed sets of regions for defining the jurisdiction of their field agents. Some of these agencies carry on two or more major lines of work, and hence use more than one set of regions. All told there are approximately 108 separate regional schemes employed by Federal administrative agencies. These are shown on an accompanying series of maps. (See figs. 30 to 47.) When compared and analyzed, there are several useful generalizations which can be made. In the succeeding discussion, the following topics are stressed: (1) The number of regions in each scheme; (2) the character of regional boundaries; (3) the location of regional headquarters; (4) the general functions performed; and (5) the relation, if any, between the nature of the regional unit and the function which is administered.

(a) *Number of regions employed.*—The number of regions in each scheme ranges from 1 to 307. The Tennessee Valley Authority and several agencies of the Department of the Interior confine their activities to a single regional area. At the other extreme is the Works Progress Administration, which employs 307 districts in its administrative procedure. These extremes, however, are not representative. If one eliminate from consideration those few regional schemes which do not embrace the whole country—as one must to avoid distortion of the results—it will be found that over half the regional schemes use less than 10 regions. Except for an expectably strong clustering about the choice of 48 regions (coterminous with the States), less than 20 schemes possess more than 17 regions each. In other words, the adoption of regional schemes has probably been motivated in the main by the desire to administer areas fewer and larger than individual States. While this would not necessarily mean the simple grouping of States into regions, it would mean that the present subdivisional units, the States, had been found both too small and too numerous for efficient discharge of the Federal functions.

An analysis of the regional schemes using less than 17 regions shows that there is no great agreement on the exact number of regions which is most desirable. A scheme of 12 regions is the most popular, and is used by agencies of such major importance as the Federal Reserve System, the Farm Credit Administration, and the Employees' Compensation Commission. Certain bureaus of the Treasury, War, and Navy Departments also use 12 regions. Next below 12 regions, schemes of 7 and 9 regions are the most frequently used. The Interstate Commerce Commission and the National Recovery Administration are among the agencies using 7 regions, while 9 regions are used by the War Department in its Corps Areas, by the Forest Service, Agricultural Adjustment Administration, and Federal Emergency Relief Administration. Other numbers of regions below 17 are chosen, but slightly less frequently than 12, 9, and 7.

(b) *Boundaries of regions.*—Regional boundaries adopted by the several agencies show very little correspondence. Except in the case of the supply arms and services of the War Department, each agency has chosen its boundaries with slight knowledge of or concern for the boundaries already chosen by other bureaus. A comparison of the maps appearing in this report makes this point readily evident. Some of the bases on which boundaries were drawn may, however, be enumerated. State lines, physiographic features, politics, the localization of the objects of administration, transportation convenience, and the desire to equalize the burden of work among the regions have all at one time or another played their part. The least frequent influences of those enumerated are probably politics and physiographic features. The other four factors are considered in the establishment of practically all regional schemes, but which ones actually do or should carry the greatest weight is not readily ascertainable.

(c) *Regional centers.*—Most regionalizing agencies have not only drawn boundaries for their regions but have also selected a headquarters city for each region. Out of the approximately 100 regional schemes now in use, only 7, such as the Bureau of the Census and the Office of Education, have regions without regional headquarters. The 82 regional schemes which cover the whole country have a total of 1,300 regional offices distributed among 195 cities. The map, "Federal Administrative Regional Headquarters", shows these cities and indicates which of them are most frequently chosen in regional schemes. Outstanding among this group of cities are San Francisco (including Berkeley and Oakland), New York, and Chicago. San Francisco is chosen by 73 schemes, New York by 69, and Chicago by 66. By "a priori" reasoning as well as by

inductive analysis they might be regarded as the three logical regional centers of the United States. They are not, it should be observed, the three most populous cities in the country, nor is the frequency of their use in administrative regional schemes in the order of their population. San Francisco has a lesser population in its own part of the country than has Los Angeles, for example, and in terms of the Nation as a whole, it is below such cities as Philadelphia, Boston, and Detroit. The choice of regional headquarters, in other words, is not a simple factor of population, but depends also upon the location of the city in a particular part of the country and upon the centralness of its position within that region.

Although the three cities named stand preeminently above all others in frequency of choice, the next group of cities chosen (those selected in 36 to 48 regional schemes) shows clearly the same placing of a premium on location at the expense, if necessary, of population. Indicated on the map by the second largest circles, Boston, New Orleans, Denver, Atlanta, and the Twin Cities are very important as regional centers. San Francisco, New York, and Chicago, it is evident, permit only a vertical division of the country—into eastern, central, and western regions. It is significant, therefore, that 2 of the 5 cities in the lower group are southern cities. New Orleans and Atlanta are alternatively headquarters for the whole South, or else they are both used in single regional schemes for two halves of the South. The prominence of Boston suggests the frequency with which New England, or a portion of it, is granted regional status even in a scheme with few regional units. Denver is headquarters for the Mountain States and draws its territory from regions otherwise served by San Francisco and Chicago. The Twin Cities (St. Paul being generally preferred over Minneapolis) draw almost entirely on the territory otherwise allotted to Chicago. Except for Boston, which with its environs has a population of over 2,000,000, the cities in this group each have less than 500,000 inhabitants (St. Paul and Minneapolis combined, however, having 800,000).

The eight metropolitan centers described lead by a substantial margin the frequency of their choice by Federal agencies. However, there is a group of 13 cities, indicated on the map by the third largest circles, each of which is the headquarters for over 20 regional schemes. In the order of their frequency, these are, Seattle, St. Louis, Portland, Baltimore, Kansas City, Washington, Philadelphia, Cleveland, Los Angeles, Detroit, Cincinnati, Pittsburgh, and Omaha. The cities and towns used by less than 20 Federal agencies are shown on the map but need not be discussed here.

Considering as a group the 21 cities represented by the larger circles on the map it is apparent that they are concentrated largely in the eastern half of the United States. Of the 21 cities, 16 are located east of the hundredth meridian. This may properly be interpreted as an index to the fact that regional divisions are more numerous and smaller in the East than in the West. Inspection of the maps of administrative regions will prove this to be the case. Undoubtedly, the concentration of population in the east is the basic explanation. While several Federal agencies are less concerned with citizens than with physiographic characteristics—such as watersheds, arid land, mineral deposits, and forests—the bulk of Federal bureaus are enforcing law or performing services in such a way as to find that the magnitude of their tasks is roughly proportioned to the concentration of population. The desire to equalize the burden of work on a population basis necessitates, therefore, a multiplicity of regions in the east where the population is dense and a lesser number of regions in the West where the population is sparse.

In the eastern section it will be seen, also, that 14 of the 16 cities are located north of the thirty-eighth parallel. Concentration of population is again the explanation for the frequency of headquarters in the north and their infrequency in the south.

Factors which influenced the frequent choice of the 21 leading headquarters may be described as follows: Relative location, population, transportation facilities, availability of office space, location of headquarters of cooperating agencies (including to a certain extent State capitals and State agricultural colleges), and, of course, location of the objects of administration.

(d) *Functional grouping of regions.*—The preceding paragraphs give a factual review of the Federal regional schemes as an undifferentiated whole. These schemes may, however, be grouped into some 11 categories as follows:

(1) Finance and credit; (2) Transportation; (3) Taxation; (4) Coast and Great Lakes; (5) Construction; (6) Drainage basins and river systems; (7) Regulation of citizens' activities; (8) Supervision and audit of Government agents; (9) Confidential investigation; (10) Federal aid; and (11) Collection, analysis, and distribution of information.

With this breakdown into functional groups, Federal regional schemes may be rescrutinized in order to see whether or not there is a greater correspondence of regional divisions to the functions performed, than is revealed by an examination of the matter as a whole.

In the field of finance and credit, six agencies have been chosen for analysis: The Federal Reserve Board, Farm Credit Administration, Reconstruction Finance

Corporation, Federal Housing Administration, Federal Home Loan Bank Board, and the Securities and Exchange Commission. Three of the 6 use 12 regions, while the R. F. C. uses 32, the Housing Administration 10, and the S. E. C. 8. Boundaries of no two regional schemes are coincident, nor are they drawn on identical premises. Limiting the analysis for the sake of simplicity to the schemes with 12 regions, those of the Federal Reserve Board, Farm Credit Administration, and Federal Home Loan Bank Board, it will be found that two of them follow State lines in every case, while the Federal Reserve district boundaries frequently divide States. Even such supposedly traditional regions as New England are treated variously by the three agencies. The Federal Reserve Board, while recognizing most of New England as a district, deprives it of Fairfield County, Conn. The Farm Credit Administration adds all of New England to New York and New Jersey to form a region, while only the Federal Home Loan Bank Board recognizes the six Northeastern States as wholly within a distinct New England region. The Pacific Northwest is another so-called "fundamental region" treated differently by each of the three credit agencies. The Federal Reserve Board includes the Northwest in a western region whose eastern boundary is so drawn as to include Idaho, Utah, and most of Arizona. The Farm Credit Administration treats the Northwest as an area distinct from the Southwest, but includes Montana with Washington, Oregon, and Idaho. The Federal Home Loan Bank Board, while separating the Northwest from California and its immediate neighbors, extends the region so as to include not only Montana, but Wyoming and Utah. New England and the Pacific Northwest are two areas of the United States which have been fairly definitely recognized as distinct regional units by the general public. The heterogeneity of methods used in grouping States and parts of States by credit agencies is, therefore, much less in these instances than in others not so commonly recognized. But in spite of this there seem to be no fundamental regional lines used or known to the several Federal agencies concerned.

Divergence of regional boundaries among the several regional schemes is not, however, entirely the result of the caprice and whim of an amateur cartographer on each of the agency's staffs. Federal Reserve districts were said to have been delineated after an extensive study of possible boundaries and headquarters by an organization committee under the chairmanship of the Secretary of the Treasury. They were subsequently revised by the Federal Reserve Board in accordance with the experience gained through using the original districts. The original bases for determining the regions as described by the organization committee

were the mercantile, industrial, and financial connections existing in each district; the general locational situation of the district, transportation lines, and the facilities for speedy communication; and the population, area, and prevalent business activities of the district, whether agricultural, manufacturing, mining, or commercial, its record of growth and development in the past, and its prospects for the future. One of the principal bases sought for the Federal Reserve districts, in other words, was the economic unity of each district. Whether this was actually achieved is, however, another matter.

The Farm Credit Administration chose a diametrically opposite principle from that of the Federal Reserve. It desired to draw its district boundaries so that no district would be completely dependent on the success or failure of one agricultural crop. Through dividing the wheat and corn belts, for instance, among several districts, and through including within each district, areas producing several major crops, it was thought that the credit situation of each district would be stabilized, since within each district the success of one crop or great group of industry would compensate for the failure of another. In other words, each district was to be agriculturally heterogeneous, in contrast to the attempted homogeneity of Federal Reserve districts.

The analysis which has been given of selected credit agencies of the Federal Government could be multiplied to cover all the areal groupings of Federal agencies, but would reveal only slightly varying results. Regions for Federal administration have been drawn not only according to the 11 or 12 broad field activities of the Government, but there is a further refinement of regions upon the principle of functional specialization with each sphere of activity. The Federal Reserve districts would apparently not only fail to serve well for such things as steamboat inspection or for the management of wild game, but apparently they would not even serve well the other credit functions of the Federal Government.

3. Regional Organization for Planning

Approximately 15 Federal agencies of bureau status or higher, in addition to the National Resources Committee itself, have adopted sets of regions for use in planning and program-making. It is obvious that for many activities of the Federal departments there is required either long- or short-term planning. Most Government agencies, however, formulate their plans and policies for the country as a whole rather than regionally, whereupon they usually apply the resulting programs on a national basis. As alternative to this latter, they may, in applying their plans and policies, recognize

sectional or subnational areas in an informal way without going to the length of demarking boundaries and setting up field offices for distinct regions.

Some few administration agencies have, on the other hand, recognized that the conditions in one part of the country differ from those in another part, and that these differences should be taken into account in any planned program. Accordingly, 15 bureaus of the Federal Government have now established and are using definitely demarcated regions for the purpose of planning. (See the list that follows which contains index references to figures 30 to 47, and 27.)

Certain lessons must have been learned from experience in the process of delineating and using these departmental planning regions, and these should be canvassed in order to discover what bearing they would have on the problem of regions for general national planning. In addition, they would have important direct relations to any national regional planning units which might be set up. These latter would be faced constantly with the problem of dealing with and correlating their work with these existing intradepartmental regions.

The following discussion of Federal planning regions will center about, (1) the Federal administrative agencies which use planning regions; (2) the functions for which planning is done regionally; (3) the number of planning regions; (4) the bases for boundaries of planning regions; and (5) the regional headquarters.

MAPS OF FEDERAL PLANNING REGIONS

Most of the regional schemes used by Federal agencies for planning are also used for general administration. Maps of such schemes, therefore, appear with other maps of Federal administrative regions. The Bureau of Reclamation and the Bureau of Public Roads, however, each have a single western region for planning purposes, which is not shown on the administrative maps. The boundary of the Bureau of Reclamation's western region is drawn on the eastern boundary of the States from North Dakota to Texas. The boundary of the Bureau of Public Road's western region is drawn on the western boundary of the same States.

The following schemes for regional planning are presented cartographically on the maps of corresponding Federal administrative regions:

1. War Department:

32d. Procurement planning zones.⁶²

Air Corps:

32e. Procurement districts.

Chemical Warfare Service:

32f. Procurement districts.

⁶² Index numbers refer to figs. 30 to 47.

1. War Department—Continued

Corps of Engineers:

33a. Power zones.

33b. Procurement districts.

33c. River and harbor divisions.

Medical Department:

33d. Procurement districts.

Ordnance Department:

33e. Procurement districts.

Quartermaster Corps:

33f. Procurement districts.

Signal Corps:

34a. Procurement districts.

2. Department of Agriculture:

Agricultural Adjustment Administration:

38f. Program planning division: Land policy section: Regions.

27a. Program planning division: Type of farming regions.⁵³

Bureau of Public Roads:

40f. Districts.

Extension Service:

41a. Sections.

Forest Service:

41e. Regions.

3. Department of the Interior:

Petroleum Administrative Board:

27b. Planning and coordination regions.⁵³

4. Independent establishments:

Farm Credit Administration:

43b. Districts.

Federal Reserve Board:

44d. Districts.

National Resources Committee:

46a. Planning districts.

(a) *Agencies which use planning regions.*—It will be seen from the accompanying maps that planning regions have been provided for, to a significant degree, by only two major departments, the War Department and the Department of Agriculture. In the former, regionalization for procurement planning is characteristic of the office of the Assistant Secretary of War, and the Quartermaster Corps, Ordnance Department, Corps of Engineers, Signal Corps, Medical Department, Chemical Warfare Service, and Air Corps. Related to procurement planning is the power zone scheme of the Corps of Engineers. In its civil activities, the Engineer Department has established river and harbor divisions and districts. Four agencies of the Department of Agriculture have established regions for planning: The Extension Service, the Bureau of Public Roads, the Forest Service, and the land policy section of the Agricultural Adjustment Administration. Agencies of the Interior Department are in several instances legally restricted in their work to the western part of the United States. The Bureau of Reclamation, for example, is required by statute to confine its

activities to the public-land States west of the one hundredth meridian. Among the independent agencies of the Federal Government only the Farm Credit Administration and the Federal Reserve Board appear to plan regionally. The Tennessee Valley Authority, which is a rather special case, is treated elsewhere in this study.

(b) *Functions treated in regional planning.*—The names of the agencies which plan regionally are in a measure indicative of the functions for which they plan. However, the scope of governmental activity for which regional planning has been deemed necessary or desirable may be more fully described. The office of the Assistant Secretary of War and the seven supply arms and services plan in peace time for the war-time procurement of supplies for the Army. This involves the survey of factories to ascertain their capacities and their requirements of raw materials, labor, power, and transportation. By reason of the localization of industry the industrial capacity for manufacturing certain military supplies is concentrated in one or two regions. By reason of the vulnerability of certain parts of the United States to foreign attack, the War Department desires to place its contracts for military production in inland manufacturing regions. Both localization of industry and considerations of military strategy, therefore, necessitate regional planning. That this function of military-industrial planning on a regional basis is highly significant is indicated by the fact that the supply arms and services of the Army accounted for 86 percent of the total Army expenditures during the World War. The Quartermaster Corps alone spent over 4 billion dollars for the purchase and distribution of guns, ammunition, and related articles.

The Corps of Engineers of the Army, in addition to planning for the procurement of manufactured articles, formulates a program for the employment of the power resources of the country in time of war. For this purpose it has a special regional scheme of power zones and districts by means of which it keeps up to date the locations and capacities of all important generating plants and transmission lines. The Engineer Department in its civil capacity plans regionally for the development of water resources, including navigation, power, flood control, irrigation, and water supply.

The Extension Service of the Department of Agriculture formulates its policies regionally to deal with marketing for regional products, land use, rural rehabilitation, increasing farm production for home consumption, farm forestry, production of milk, control of insect pests and diseases, and control of livestock diseases. The Bureau of Public Roads plans regionally for the construction of roads in national forests and national parks. Its regional relations with the States in connection with the construction of highways are

⁵³ These 2 sets of regions are not used for administrative purposes, but for planning only.

principally administrative and supervisory; in this field planning is national rather than regional. The Forest Service of the Department of Agriculture plans regionally for the protection, development, and administration of forest, range, and wild lands. In this function, it deals with lumbering, grazing, recreation, and the effects of land use on floods, erosion, and water supply for domestic use, power, and irrigation purposes. The Land Policy Section of the Agricultural Adjustment Administration plans regionally for the purchase of submarginal land, rural resettlement, and other related items.

The Bureau of Reclamation of the Interior Department investigates irrigation resources, prepares plans for irrigation projects, including power development, and plans for the settlement and improvement of irrigated lands.

The two independent agencies—the Farm Credit Administration and the Federal Reserve System—leave to their regional offices substantial freedom in determining local credit policies, subject, of course, to reversal by the Washington headquarters.

(c) *Number of regions used.*—In number of planning regions, the administrative agencies vary greatly. The Bureau of Reclamation, serving only the West, may be said to have but 1 region, while the Ordnance Department has 14 regions; although the Engineers Corps' divisions number only 10, its districts total 40. One and 40, however, are but extremes in the entire group of 17 agencies. Of the 17 agencies, 8 group themselves together, having between 6 and 10 regions in their respective regional organizations. Three of these agencies—the Quartermaster Corps, the Forest Service, and the land-policy section of the Agricultural Adjustment Administration—agree on 9 as the desirable number of regions. Of the same grouped agencies, 2—the Chemical Warfare Service and the Corps of Engineers—have each chosen 6 regions for procurement planning. For other than these agencies, employing between 6 and 10 regions, 4 and 12 are the numbers of regions most frequently chosen. Four divisions characterize the schemes of the office of the Assistant Secretary of War, the Signal Corps, the Corps of Engineers in its power inventory, and the Extension Service of the Department of Agriculture. Even more agencies choose 4 than choose 9 regions. However, this fact should be discounted since the War Department schemes are all closely related, the Assistant Secretary having appropriated for his own activities the 4 power zones of the Corps of Engineers, and having required the Signal Corps to have no less than 4 regions. The 2 independent agencies—the Farm Credit Administration and the Federal Reserve Board—each have 12 regions. Summarized, then, planning regions number from 1 to

40, but group themselves principally between 6 and 10. Four agencies, however (3 of them related), have schemes of 4 regions, while 2 agencies have chosen schemes of 12 regions.

(d) *Regional boundaries.*—The number of regions differing as considerably as it does, it is to be expected that the regional boundaries chosen by each agency will show slight similarity to those of the other agencies. Boundaries in practically every case have been chosen in disregard or ignorance of the boundaries already adopted by other branches of the Government. Generalized, the considerations probably influencing the Federal agencies in their choice of boundaries were: (1) natural groupings of their objects of planning—whether forest, arid lands, watersheds, or armament factories; (2) administrative convenience, which usually means transportation convenience; and (3) State boundaries.

State boundaries are rigorously followed by six regional schemes. Three schemes follow State boundaries except for the division of Pennsylvania and Maryland. Four schemes, such as that of the Federal Reserve System, divide States with some frequency, but adhere to State boundaries in all cases where there is no important reason for varying from them. Only one regional scheme, that of the Engineer Department's river and harbor divisions and districts completely ignores State lines—the boundaries in this case being drawn along the watersheds of the country. In other words, all save one regional planning scheme inflect their regional lines, in varying degrees to be sure, to State boundaries. This would seem to be either a concession to legal and administrative considerations, or else an a priori assumption that such boundaries have a deep-seated significance.

(e) *Regional headquarters.*—Not all agencies with planning regions have organized field services on a regional basis. Of the 17 regional schemes included in this study, 4 are simply used for planning at Washington. These four are the power zones of the Corps of Engineers, and the regions of the office of the Assistant Secretary of War, the Extension Service of the Department of Agriculture, and the Bureau of Reclamation of the Interior Department. Of the 13 schemes with regional offices, 11 use San Francisco as a headquarters. Ten of them use New York and Chicago. Other cities are less frequently selected, Philadelphia, St. Louis, Boston, Pittsburgh, Baltimore, and Atlanta each being chosen, however, by more than two regional schemes. (See map fig. 4.)

(f) *A special type of region.*—The Federal planning regions, which have been examined above, are only those which coincide with the ones set up for general administrative purposes. Recently, however, there has ap-

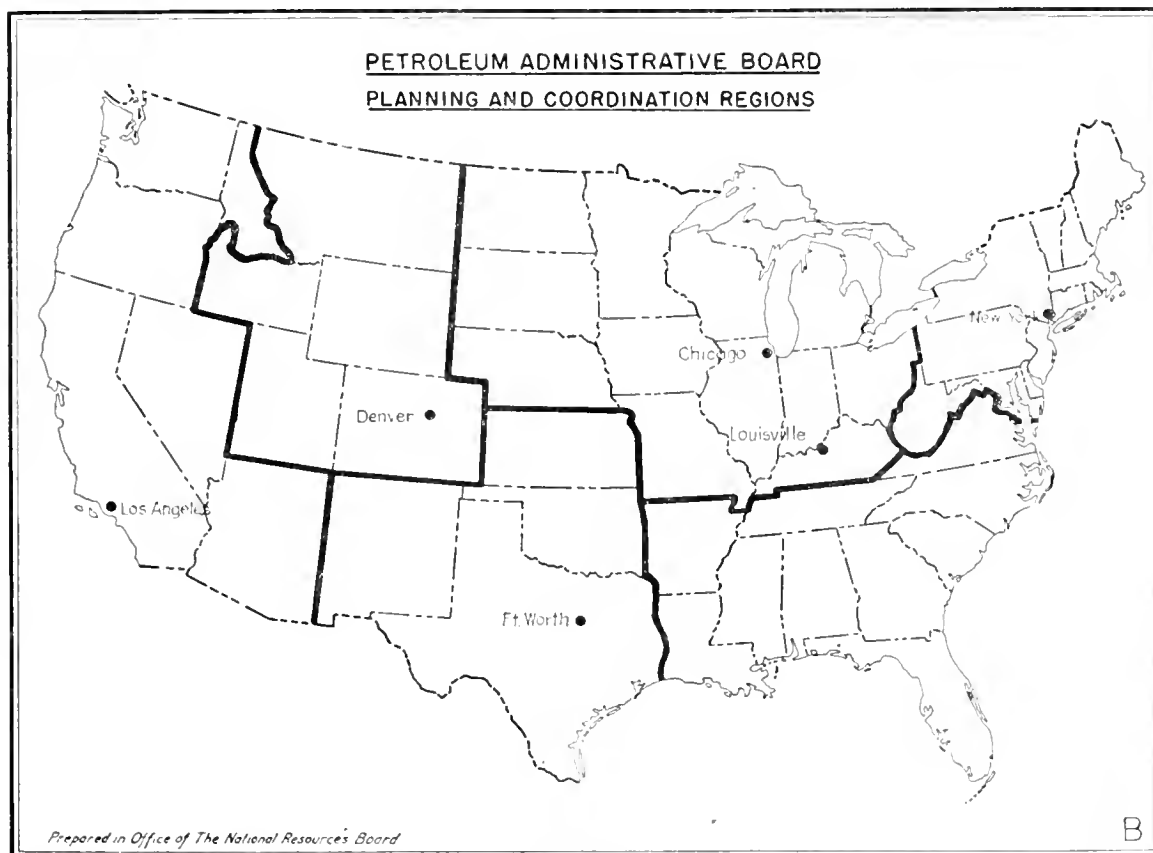
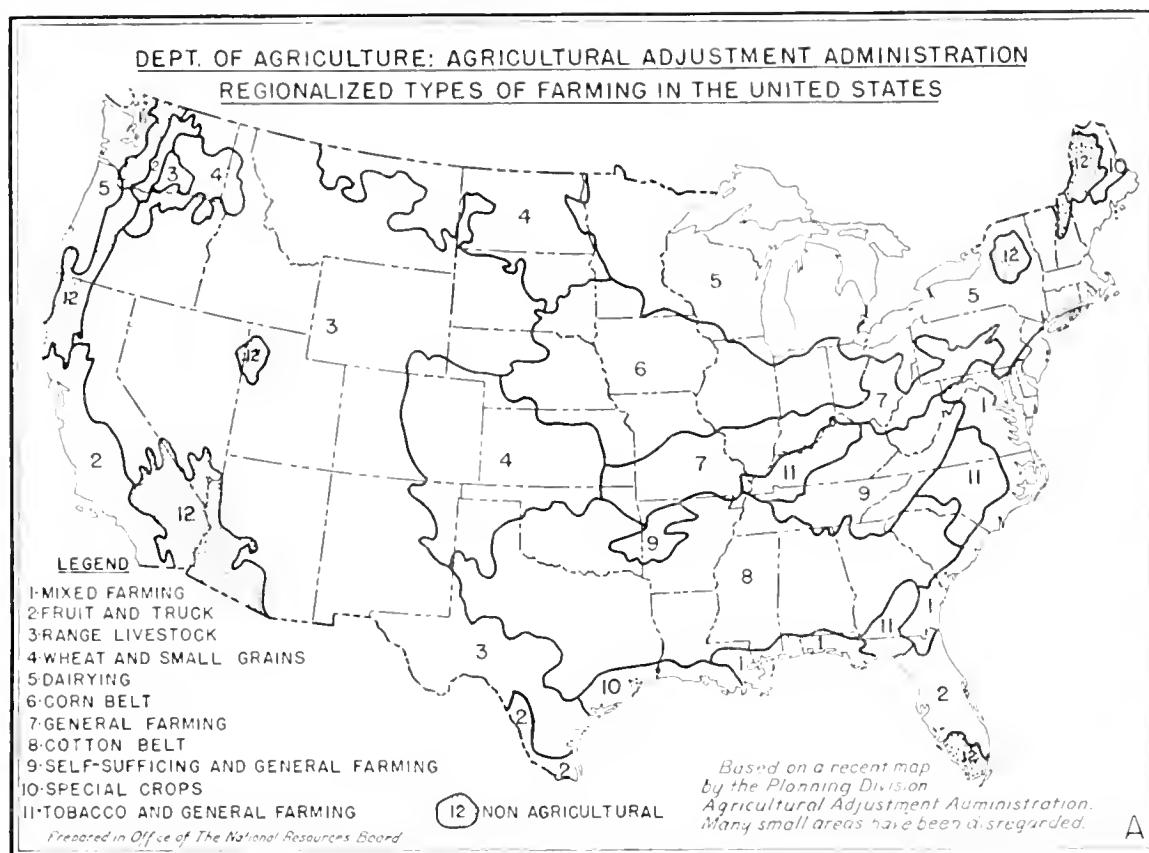


FIGURE 7.

peared a different kind of planning region, one determined on the basis of functional considerations alone without reference to administrative questions, but designed as a scientific aid to program-making. Those agencies which so far have developed this type of region are: (1) the production planning section of the A. A. A., (2) the division of sectional economic research of the W. P. A., (3) the Petroleum Administrative Board, and (4) the rural research unit of the F. E. R. A.

The production planning section of the A. A. A.— The crop control objectives of the Agricultural Adjustment Administration have demanded that rather detailed production programs be formulated but—⁵⁴

adjustment programs up to this time have been developed pretty much from a commodity point of view and from the standpoint of the Nation as a whole. Administrative units (divisions and sections covering the specific commodities or groups of related commodities) have been set up in the Adjustment Administration, the chiefs of which have been made directly responsible for the specific commodity programs. The organization in the various States has been built around county control associations and State committees, likewise organized on a commodity basis, and the programs have been administered in cooperation with the State extension services. National advisory committees for each commodity or group of commodities have been set up and have participated in the development of plans and policies, but final responsibility has centered in the Administration at Washington.

In looking ahead to the development of future programs considerable attention has been given to the possibility of developing programs from a regional point of view in which more emphasis would be given to regional and areal differences in physical conditions and types of farming, and in which the agricultural colleges and experiment stations as well as farmers would be given a greater voice in the determination of plans and policies. To this end the planning division of the Adjustment Administration has differentiated the agriculture of the country into a number of agricultural types of farming regions and areas within which there are common problems of adjustment, the objective being to indicate first the geographic specialization that prevails in our agricultural, and second, to provide a rational basis for regional planning.

In cooperation with the Office of Experiment Stations and the Bureau of Agricultural Economics of the Department of Agriculture the Agricultural Adjustment Administration recently has entered into cooperative agreements with the 48 State experiment stations for the purpose of getting each State to further refine these agricultural areas and regions, and to indicate what adjustments in the agriculture of each of them would be necessary in order that fertility be maintained, erosion controlled, and an efficient and sound farm management program be developed. The adjustments needed to reach this objective in each area will be totaled for the Nation as a whole, and then compared and harmonized with the adjustments needed to result in a desirable level of agricultural prices and income for the Nation as a whole. Just what procedure will be followed in finally translating these recommended adjustments into an

action program is yet to be worked out, but the objective is to work toward a regional approach in agricultural adjustments as rapidly as proves feasible or practicable.

Policies and programs have been developed by regions only incidentally up to this time, but greater emphasis is now being given to the possibilities of a regional approach. (See fig. 25A, Regionalized Types of Farming in the United States.) This map indicates the regional specialization in our agriculture and may serve as a point of departure for regional planning. It was based upon variation in soils, climate, and surface features, crop and livestock combinations, income by source, relative productivity, accessibility to markets, and other minor factors.

No special regional organization has been set up for the specific purpose of formulating policy. A cooperative research program, however, is now being conducted with all the 48 land-grant colleges and experiment stations looking toward the development of regional adjustment programs. The broad general objective of this cooperative research project is to provide a sound basis for coordinating acreage and production adjustments needed from a national or price point of view with the adjustments needed from a soil conservation and efficient operation point of view in each agricultural region and area of the country. This cooperative project became effective April 15 this year.

In addition to the cooperative relations with the land-grant colleges, close cooperation is also maintained with Federal agencies dealing with various phases of the agricultural problem, notably the land policy section developing the regional land program, the Forest Service, the National Resources Board, the Soil Erosion Service, etc.

The work in each State is being conducted at the State agricultural colleges. Twenty or twenty-five men are working out of Washington in coordinating the work among the various States.

No specific policy has as yet been formulated, but the immediate objective of this regional cooperative project is to provide factual background for formulating an action program. The following specific information is expected to be obtained: (a) A map showing each State differentiated into agricultural areas with similar soil- and farm-management problems (this map to dovetail into a similar map for adjoining States to form a uniform classification for the entire region and Nation as a whole); (b) the acreage and production of each crop and the number and production of each class of livestock which normally would be expected to result from the adoption of the crop and livestock systems recommended as desirable for each of the above agricultural areas and regions; (c) the difference between the acreage (or numbers) and production of the various crops and livestock resulting under (b) and those obtained in the same areas in 1929 from the actual systems in operation at that time. Having this information, the next step will be to implement the proposed adjustments into an action program for each region, area, and farm. Just what type of organization will be developed for executing the policies and program is yet to be worked out, but it probably will be a part of the same agency as that which formulates the policy. The Adjustment Administration is putting \$200,000 into this regional project, or roughly, \$4,000 per State.

The foregoing discussion relates to the developments with respect to adjustment programs which are carried out through contracts with the individual farmer. In addition to these programs there has been a great deal of work done through mar-

⁵⁴ F. F. Elliott, Chief of the Production Planning Section: Program Planning Division of A. A. A. in a letter of information to the National Resources Board.

keting agreements and licenses. These are developed on a commodity basis and may relate to local milk sheds, major agricultural areas, or even regions. They may be administered by the appointment of a manager for each local project or by a control board on which the various interested agencies are represented.

From the foregoing discussion you will note that the actual planning of programs and the formulation of policies on a regional basis has not progressed to any great extent up to this time. The regional project described above probably represents the most direct action that has yet been taken in this direction. The actual development and implementing of regional adjustment programs so far as the Adjustment Administration is concerned is still in the future.

The Division of Sectional Economic Research, W. P. A.—The public-relief program for which the Federal Emergency Relief Administration is responsible is twofold. In larger part it involves dealing with the problem of labor unemployment during the present social crisis, while in lesser part it involves a long-time view of the relation of industry to employable labor. At an early stage in the work it was recognized as impossible to derive and apply an economic formula for the entire country. It was likewise recognized that there were no easily discoverable divisions of the country to which subnational formulae could be applied with any degree of satisfaction. Accordingly, there was set up a Division of Sectional Economic Research under the direction of Col. James M. S. Waring, to discover a method of analysis of industry which would reveal critical relations in labor unemployment and which would at the same time localize these into definite areas or regions. Later, this research unit was transferred to Works Progress Administration.

Almost at the outset, this agency recognized that the Nation consists of many economic sections, each of which possesses definite interests and a unique sectional economy. These sections or local units fit into a pattern or organic whole which gives form and substance to the total national economy.

The criteria for delimiting economic section are four—(1) agricultural (fundamental stability factors), (2) industrial (fundamental stability factors), (3) political (tax burden, funded debt, delinquency), (4) social (relief trends). In searching for economic sections, it was recognized that there are two kinds in existence—e. g., urban and rural—and that such sections may be of any geographic definition whatsoever. There are 376 cities of 25,000 or more population, each of which may or may not create a separate economic section. In addition there are several score of rural areas.

The research procedure was as follows: Census data for each county in the United States were examined and the county was classified on the basis of its funda-

mental or key industries. In the case of an industrial county only those industries which collectively employ approximately 70 percent of all gainfully employed workers were considered. In agricultural counties only those forms of agriculture whose products constitute 70 percent of the total value of production were considered. With this breakdown of data showing the *vital industries* in each county, it becomes an easy matter to group counties into economic sections which will show homogeneity in economic interests and problems of industrial employment. Incidentally, of those sections already delineated, no urban section possesses over 90 vital industries and no rural section possesses more than 4. Unemployment relief for the productive industries, therefore, consists in dealing only with the vital industries in each section.

For the services of so-called “nonproductive industries”, it may be observed that of all workers so employed, there are certain who are maintained by and directly responsive to the local section’s productive industries; others are not related in such manner. For every two workers in the productive industries, there is one dependent worker in the services. Thus reemployment in the vital productive industries automatically solves a part of the problem among service workers. But not all of the problem of the latter class is met through this channel, for service workers constitute a very large class of labor—47 percent of all gainfully employed in this country (58 percent in urban sections and 35 percent in rural sections).

Up to April 20, 1935, the data for approximately one-half of the area of the United States had been studied and classified in such manner as to reveal the vital industries underlying economic sectionalism. So far, however, sections have been delineated only for Maryland, Michigan, and Wisconsin, and the work is under way for Oklahoma and Texas.

When sectionalizing and the attendant analysis shall have been completed, it will provide the basis for many needed prognostic studies. Industrial data by sections should reveal where, with the rise of prices, it will be profitable to resume operations, where mechanization or further technological improvement is needed, where potential industries may be established, and where stranded populations are likely to result from economic changes. The data resulting from this research division have already been used by many of the divisions of F. E. R. A. and W. P. A., and have also been made available to many other Government agencies. Some regional treatment of the problem such as this, is imperative if any rational handling of future unemployment relief programs for the country is to be achieved.

The Petroleum Administrative Board.—Policies enunciated by the Board are formulated for six regions rather than for the entire continental United States. "The regional organizations which deal with the formulation of policies, plans, and programs, as well as their execution, were established under the Planning and Coordination Committee and have been in existence since August 1933. Such regional bodies are not strictly a part of the Government, but are industrial committees under the Code of Fair Competition for the Petroleum Industry (see fig. 7B).

"The regions used by this Board are those established by the planning and coordination committee of the industry. The regions apparently were made on (1) the basis of similarities in operation within the States included in each division and (2) to the zones of operation of the old Standard Oil Co. Most of region no. 1, for instance, is the so-called 'Standard of New York' territory; most of region 2, Standard of New Jersey, together with its affiliates, Standard of Kentucky and Standard of Louisiana; region no. 3, Standard of Indiana with Standard of Ohio in the State of Ohio; region 4, several of the large companies which operate in the mid-continent field; region no. 5, Continental Oil Co.; and region no. 6, Standard Oil Co. of California. As the industry is now organized, there are overlaps of these companies in different areas, and hence the industry has to think of the regions more or less in terms of the activities of the market leaders of the area.

The regional organizations deal with the Administrator of the Oil Code or the Petroleum Administrative Board of the Department of the Interior through the Planning and Coordination Committee of the industry which has headquarters in Washington. The local representatives at times "short circuit" the planning and coordination committee through direct contact with the regional committees.⁵⁵

The Rural Research Unit, F. E. R. A.—The Rural Research Unit of the Federal Emergency Relief Administration, among its several duties, has been assigned the task of analyzing the population on public relief—the entrance into and exit from the relief picture of certain population groups, together with their social, economic, racial, locational, and other characteristics. A complete examination of these topics would entail an enormous study, and consequently the problem of sampling comes to the fore. This in turn leads to the question of what are the regional divisions which must underlie sampling.

⁵⁵ John W. Frey, Petroleum Administrative Board, in a letter to the National Resources Board.

On September 10, 1935, the coordinator of rural research, Dr. T. J. Woofert, convoked informally a small working group of men interested in regionalism, part of whom were from the universities and part from the Federal Government. The questions considered were as follows:

(1) Is it possible to delineate regions homogeneous enough according to a number of indices to be designated as general-purpose research regions for the grouping of official statistics and of research institutions and projects?

(2) What should the relation of these be to political units—States and counties?

(3) What indices should be used in demarking regions?

(4) To what extent will it be profitable to subregionalize?

(5) How far would it be profitable to go in designating areas (States, counties, or cities) typical of regions?

The final result of this effort may be the delineation of a set of regions to serve as a framework for general social and economic research, and perhaps to serve eventually as a basis for the grouping of official statistical data.

4. Regional Organization for Decentralizing Control

A very few Federal agencies have employed regions as means of accomplishing decentralization of control. The Federal Reserve Board has, for example, divided the country into 12 districts, not for facilitating field administration, nor yet for planning, but apparently for actual devolution of Federal control. The Tennessee Valley Authority with its single region accomplishes similar ends. As a general rule, however, regional decentralization is a process which has not as yet proceeded very far in the Federal Government.

5. Coincidence in Federal Regions

Even a most cursory examination of figures 30 to 47 is sufficient to show that there is little coincidence among the one-hundred-odd regional schemes used by the Federal Government. In regard to the number of regions used, it may be pointed out that more than three-fourths of these schemes employ less than 17 divisions; 12 regions being chosen slightly more often than any other. In the choice of headquarters, 21 cities have been selected by 20 or more agencies; 3 of these, New York, Chicago, and San Francisco have been selected by 55 or more. In the matter of regional boundaries, there is much less correspondence; each agency has seemed to choose its boundaries with little concern for those of other agencies. As a consequence, there is no single area in the country which is recognized as a region with anything like universality. Even such a traditional unit such as New England, is dismembered more frequently than not.

Of the 108 regional schemes used by Federal administrative agencies, 93 extend over the New England area (*see* figs. 39 to 47). These latter may be grouped into 4 descriptive categories: First, 20 systems which embody a region composed of the 6 New England States; second, 13 systems which contain a region comprising all of New England except for all or part of Connecticut (this latter being regarded as an integral portion of the New York metropolitan area); third, 41 schemes wherein the 6 New England States are grouped with others into a larger administrative region, sometimes comprising the 10 Northeastern States, and sometimes even more extensive groupings; fourth, 19 arrangements which divide the New England area into 2 or more regions. Of these 11 are subdivisions within New England itself, while 8 transect the outer boundary of New England.

It is difficult to determine to what extent these four categories should be regarded as affirming or denying New England's regionality. The 20 schemes which group the 6 New England States together certainly affirm it administratively. The 13 schemes which deprive it of all or part of Connecticut would also seem to be a recognition of the area's basic regionality. Those 11 arrangements which subdivide New England internally are difficult to interpret, they may either affirm or deny regionality.

On the other hand, the 8 schemes which transect the New England States and the 41 which swallow them up into larger regions would seem to definitely deny regionality. The difficulty here, is to determine whether failure to set up New England as a region is due to a belief that it is not a proper regional unit, or whether it is due simply to a situation where for administrative reasons an unusual multiplicity or paucity of regions is desirable.

In short, out of 93 cases, 33 affirm New England's regionality, 49 tend to deny it, and 11 are wholly indeterminate. Since New England, which is a traditional regional unit, is thus unsatisfactorily treated, it is obvious that other less well-defined parts of the country are dealt with in even less conclusive fashion.

6. Redesigning Federal Regions

The most far-reaching and significant proposal with regard to Federal administrative regions which has been made is that all the regional schemes should be supplanted by a single set of divisions serving the whole Federal Government. At the outset, two questions may be raised: (1) Is standardization of administrative regions desirable; and (2) is it possible.

The inquiry of this committee has necessarily been focused upon the larger problem of regionalism as it

enters into the total national picture with an emphasis upon the significance of regions to any future national planning and coordinating agency. It is not wholly within the scope of this inquiry, therefore, to go into a proposal for the reform of Federal administrative areas.

From the committee's standpoint, there would of course, be a substantial profit in having all Federal administrative regional boundaries coincident with boundaries of any possible future planning regions, and all Federal administrative regional headquarters identical with the headquarters of the planning regions. Each administrative agency would likewise gain something since its cooperation with other agencies in the field would be facilitated and its expenditures for office space reduced. This whole subject, however, requires a separate study of considerable scope, and cannot justly be analyzed simply from the standpoint of the profit of a possible national planning agency. It is certainly a moot question whether the individual administrative agencies would not lose more in the efficiency and economy of their own field administration than they would gain in the opportunity for cooperation with other field establishments. Many administrative regional schemes are certainly ineptly constructed, but the great majority of them have been so drawn as to secure a fairly good field administration of the particular function to be performed. The aggregate result, as will impress anyone comparing the maps, appears to be a chaos superficially unjustifiable, but in reality it is a chaos resulting simply from the fact that each agency has attempted to carry on its own activities upon a pattern scheme of regions designed by itself and supposedly best adapted to its needs. Whether the present chaos impedes Federal administration, whether there would be substantial advantages in correspondence of regional boundaries for all agencies, whether the disadvantages of correspondence could be obviated by establishing 5 or 10 Federal schemes based on functions such as credit, tax collection, and public land activities, and whether existing regional schemes are actually the best for their particular functions, are questions the answers to which could be stated with confidence only after a thorough inquiry. The only recommendation the committee can make with reference to administrative regions, therefore, is that such a study should be undertaken. Until the completion of such an investigation, the authority responsible for selecting planning regions cannot with any assurance rely heavily on the existing boundaries and headquarters of administrative regions. The national planning agency, as already pointed out would profit if its regions and headquarters could be the same

as those of all Federal administrative agencies. But these latter differ too greatly to permit the planning agency to copy them, and even if they did correspond at present, boundaries and headquarters are shifted too frequently to justify the construction of planning regions on such an unstable foundation. Finally, existing administrative regions may not be the best possible areas for administration, and hence they might well be adjusted to conform to scientifically conceived planning regions, rather than forcing the latter to conform in Procrustean fashion to artificial administrative regions.

In regard to the second question, "Is standardization possible?" several partial answers may be returned. First, it may be entirely possible if the premises of field administration be adjusted somewhat. Second, it would be relatively easy if all bureaus and special agencies involved were classified into general functional groups—e. g., those which are engaged in administering a land program, a transportation program, or a program of social and economic regulation. Standardization within each group might easily reduce the number of regional schemes to a dozen or less.

Third, in the event that the activities of the national planning board be devolved to subnational centers, regional cooperation by Federal administrative agencies participating in program making would become imperative. It is conceivable that these new activities clustering about the regional planning centers would become so important that the participating agencies might eventually adopt the national planning board's regional scheme as a basis for their entire field administration. In this manner, standardization of field regions might be brought about among quite a number of agencies, but the larger part of the problem would necessarily remain unsolved.

One possible result of the grouping of Federal administrative districts in relation to the areas in which major planning problems are located, is the stimulus which would thereby be given to the coordination of

local governments. There are at present some efforts here and there to build up stronger local public services by a grouping of counties for joint administration of various functions which can be more adequately administered and financed in this way. If the National Government were to take a lead in determining natural regions requiring unified treatment for certain functions, and were itself to reflect these in its administrative organization, the local governments in that area might find real economies in establishing common administrative agencies for certain of their functions which relate to these problems.

7. Conclusions and Summary

In conclusion, it may be pointed out that the amount of territory over which a regional office can conveniently carry on its activities, the number of regional offices which Washington can easily supervise, the importance of State lines in drawing regional boundaries, and the methods of subregional division are all problems which have been faced by Federal agencies and solved, however imperfectly and shortsightedly, after years of dealing with the matter.

Regionalization as it has entered into Federal administration so far has been merely a device for decentralizing bureau activities rather than for isolating the fundamental characteristics and problems of areas, to which governmental administration might well be inflected. Most of the divisions employed by Federal agencies are no more than regions by designation. In a few instances, where functional considerations are more strongly in evidence, the divisions used approach the single-factor type of region. None, however, even approximate the composite type of region.

At present new tasks are devolving upon the Federal Government, and these entail new methods of solution and execution. Economic, social, and physical factors are thrusting themselves into the picture, and these will no longer give way wholly to questions of administrative convenience or established modes of procedure.

CHAPTER IX. FEDERAL REGIONAL AUTHORITIES—THE TENNESSEE VALLEY EXAMPLE

1. Introduction

A consideration of the role of regional factors in a program of national development leads to an examination of the possibilities of the federally created regional authority⁵⁶ as a means for accomplishing desired ends. At the present time, the sole example of such an organization is the Tennessee Valley Authority, created by Congress and approved by the President on May 18, 1933. Frequently cited as the most significant of the "new deal" developments, the T. V. A.⁵⁷ has been watched by millions with the greatest interest and has been received both with enthusiastic acclaim and bitter criticism.

This unique experiment is administered as a Government corporation, "clothed with the powers of government but possessed of the flexibility and initiative of a private enterprise", and carrying on a multiplicity of functions embracing the fields of water control, power development and utilization, fertilizer production, agricultural and industrial development, afforestation and soil erosion control, land planning and housing, and social and economic research. Its direct influence has been felt by approximately 2,000,000 people living in the watershed, while additional millions in the adjoining territory are also affected (See map, figure 8.)

The larger import of the T. V. A. however, is national in its scope. One of the directors has made the following statement:

Naturally the national purpose of this test is continually in the mind of the Board of Directors. Every step taken, every project set up, every result obtained is weighed from the point of view of its possible application to other parts of the country * * * The fundamental purpose of the T. V. A. is to provide a basis for national coordination. All these activities are subordinate to the creation of a procedure which may confidently be applied to the whole country.

Already proposals have been introduced into Congress seeking the creation of similar regional authorities in other watersheds of the country. The areas affected include the territories drained by the Columbia River, the Upper Mississippi River, the Missouri River, the Arkansas, White, Ouachita and Red Rivers, the

Connecticut River, the Merrimack River, the Wabash and White Rivers, the Cumberland River, and the Tombigbee River.⁵⁸ The problems arising in these areas are by no means identical but, nevertheless, the proposals, without exception, draw heavily upon the T. V. A. precedent. The Tennessee Valley project has become a national laboratory as well as a regional planning and development scheme.

Today the T. V. A., with its more than 13,000 employees, its various construction activities, its electricity program, its social and economic planning, and its legal and administrative structure, offers valuable lessons from its 2 years of experience. However, final judgments concerning the success or failure of the T. V. A. program are clearly impossible and unjustified after such a relatively short period of corporate existence. It is not our purpose to pass judgment or to write prescriptions, to praise or to condemn. Judging from the indications which have appeared so far, is the T. V. A. a desirable governmental unit for regional development and for national planning? Does it fit into the administrative pattern which the country has inherited from the past; is the T. V. A.'s corporate organization one which might be copied profitably in case other regional schemes are authorized by congressional act? These are the principal questions with which we are concerned in this survey.

The T. V. A. is a regional planning agency which has been given the coordinate power of putting its own programs into execution. This combination of authority is designed to achieve results. The T. V. A. represents a marked advance in the United States for creative government and instrumental planning. Planning is essential to orderly, progressive development and cannot be neglected without serious consequences. And yet, planning, in and of itself, is not enough. Plans which are unexecuted and forgotten all too frequently appear, and regardless of their merit, contribute little to progress. Hence the distinction between "planning" and "development." Development is conceived as a dual process, growing out of the effective execution of intelligent plans. Natural resources, for example, are conserved, utilized, and developed only in the field.

It is with this distinction in mind that the full significance of the T. V. A. may be grasped. Charged

⁵⁶ An "authority" is a legal and administrative unit, with powers like those of a corporation, and created by legislative act for the purpose of carrying out certain specified powers, usually of a public-utility character.

⁵⁷ The initials T. V. A. will, for the sake of brevity, be used liberally in this chapter to indicate the Tennessee Valley Authority.

⁵⁸ For reference to these acts and their provisions, see *infra*, pp. 113 ff.

by Executive order of the President, issued in pursuance of the T. V. A. Act,⁵⁹ with the duty of making surveys and plans for the general purpose of "fostering an orderly and proper physical, economic, and social development" in the region, the T. V. A. has assumed a planning function which is not isolated, but rather inextricably tied up with developmental powers. It has thus become more than a "regional planning" agency; it is a "regional development" agency. Soil-erosion control, for example, is not only being planned but is being earnestly and vigorously implemented. A water-control program is being planned and executed, as evidenced by the actual construction of three strategic dams. Progress is being made in the fostering of agricultural and industrial development. Indeed, so much attention has been given by the T. V. A. to tangible results that the broad planning function has suffered somewhat.

The history of the T. V. A. Act, which marked the culmination of a long period of investigation and discussion pertaining to the development of the Tennessee River, is an interesting one. The question of Muscle Shoals first arose in 1824, at which time Secretary of War Calhoun in his report recommended Federal expenditures for the improvement of navigation in the Tennessee River. President Monroe submitted the report to Congress with the result that over a half million dollars were spent in the making of surveys and the construction of canals around the shoals. Although the project was left uncompleted, the "Muscle Shoals question" was thrown into the arena of national politics and has been an issue ever since. Finally, in 1916, a provision was inserted in the National Defense Act of that year which authorized the President, after investigation as to the most suitable site, to "construct, maintain, and operate, at or on any site or sites so designated, dams, locks, improvements to navigation, power houses, and other plants and equipment or other means than water power as in his judgment is the best and cheapest, necessary or convenient for the generation of electrical or other power and for the production of nitrates or other products needed for munitions of war and useful in the manufacture of fertilizers and other useful products." In pursuance of this provision, President Wilson ordered the construction of the Wilson Dam, power house, and nitrate plants at Muscle Shoals. Since their completion, the disposition of these properties has repeatedly been the subject of congressional debates, and in 1928 and 1930 bills somewhat similar to the T. V. A. Act passed the Congress, only to be rejected by successive Presidents.

⁵⁹ Public Act No. 17, 73d Cong. This act was amended in important respects during the closing days of the first session of the 74th Cong., 1935.

Although the Muscle Shoals investment loomed large in the plan conceived by President Franklin Roosevelt for the development of the Tennessee Valley area, this was by no means the only factor. In his message to Congress, April 10, 1933, President Roosevelt said, "It is clear that the Muscle Shoals development is but a small part of the potential usefulness of the entire Tennessee River. Such use, if envisioned in its entirety, transcends mere power development; it enters the wide fields of flood control, soil erosion, afforestation, elimination from agricultural use of marginal lands, and distribution and diversification of industry. In short, this power development of war days leads logically to national planning for a complete river watershed involving many States and the future lives and welfare of millions. It touches and gives life to all forms of human concerns."⁶⁰

President Roosevelt's conception of a T. V. A. which was to perform broad planning functions for a particular section of the country is further illustrated in his proposal to Congress: "I, therefore, suggest to the Congress legislation to create a Tennessee Valley Authority—a corporation clothed with the powers of government but possessed of the flexibility and initiative of a private enterprise. It should be charged with the broadest duty of planning for the proper use, conservation, and development of the natural resources of the Tennessee River drainage basin and its adjoining territory for the general social and economic welfare of the Nation. This authority should be clothed also with the necessary power to carry these plans into effect. Its duty should be the rehabilitation of the Muscle Shoals development and the coordination of it with the wider plan."

However, this vision of a comprehensive planning program played little part in the testimony and discussion before the Committee on Military Affairs, which had the proposed bill of Representative Lister Hill of Alabama under consideration from April 11 to April 20, 1933. The much-discussed questions of power and fertilizer development were explored in detail, and some attention was given to flood control and navigation, but broader questions of economic and social planning were almost ignored. The fact is well illustrated in the minority views contained in the committee report, which stated that in regard to those provisions of the act relating to general welfare, proper physical, economic, and social development, proper use of marginal lands, proper method for reforestation, most practical method of improving agriculture, and the economic and social well-being of the people, "There was no testimony offered before the committee, either in public hearings or

⁶⁰ For the sections of the Tennessee Valley Act which make this type of planning possible, see p. 116.

in executive session, to show what is contemplated by this language."

Again, in the House of Representatives debates of April 22 and April 24, 1933, the proposed T. V. A. Act was reviewed with emphasis upon the power, fertilizer, and flood-control programs, while other questions of planning received little consideration. Senate debates also revolved around the two major questions of power and fertilizer development, and the T. V. A. Act was finally passed through Congress without investigation as to the appropriateness of the watershed area for broad planning purposes, and indeed with little reference to the extent of the planning functions to be undertaken.

Despite this fact, the area in which the T. V. A. now operates may be said to have been more fully investigated with reference to its physical resources, social needs, and its economic possibilities than any region prior to that time. "A plan for a plan" had been prepared in advance for the Tennessee drainage basin. The preliminary survey of natural resources and basic engineering and economic data was carried on intensively by Federal engineers for 10 years prior to the act of 1933.⁶¹ The value of this groundwork to the Federal authority has been great, providing an outstanding confirmation of the planner's insistence upon preplanning.

2. The T. V. A. as a Planning and Development Agency

(a) *The delimitation of the area.*—The watershed of the Tennessee River and its tributaries is the scene of most of the activities of the T. V. A. The Tennessee River is the fourth largest in the entire United States, while the average annual rainfall of the T. V. A. area is 60 inches. No region of the country is more richly endowed with the basic resource of water—and none is more perplexed and injured by its inadequate control. For example, the flow of the Tennessee River varies from 8,000 to 500,000 cubic feet a second; seasonal variations are extremely great. In the vicinity of Muscle Shoals prior to the building of Wilson Dam, the river dropped 134 feet in 37 miles. Flood damage, averaging about \$1,780,000 annually, is suffered principally along the Tennessee River proper.⁶² At Chattanooga the estimated annual flood damage is approximately \$687,000; the city's precarious situation has figured prominently in T. V. A. plans. Every few years serious floods occur on the Tennessee's tributaries as well,

and probability studies show that once in 500 years a \$14,350,000 flood may be expected.⁶³ The flood-damage figures do not include such indirect losses as those resulting from interrupted traffic and business, depreciation of lands, and sickness.

In the formation of the T. V. A. and the delimitation of its area the Government-owned property at Muscle Shoals was the starting point. The desire to utilize the dam and nitrate plants there, the growing interest in national and regional planning, and the desire for an actual experiment in planning and development of a whole region culminated in the T. V. A. The watershed area was decided upon because of its relation to navigation, flood control, and power production. In order to make Wilson Dam at Muscle Shoals more efficient for navigation and power generation, it was necessary to build an integrated system of dams at strategic points in the Tennessee River and its tributaries. In order to protect these dams from filling up with silt it was necessary to prevent soil erosion on the lands draining into the river system; hence the necessity of including all of the watershed in the area.

The cost of the ultimate development of the waters of the Tennessee Basin for navigation, flood control, and hydroelectric-power production was estimated at \$1,200,000,000 by the United States Army engineers in 1930. This intensive survey was conducted at a total cost of \$750,000. The Army engineers concluded that such a large expenditure was "sufficiently low to constitute an economically feasible and desirable project, whenever the demand for power has grown sufficiently to produce a market which could absorb such large quantities." According to their computations, the ultimate development of electricity would be 3,500,000 to 4,000,000 horsepower. This report also envisaged a 9-foot waterway for the entire length of the Tennessee River, 652 miles, and eventual construction of 1,257 miles of 6- to 9-foot waterways on tributaries. The T. V. A. is planning at present in much more modest terms.

The addition of planning functions and agricultural and industrial development to a program of flood control, navigation improvement, and power generation created a complex and difficult problem. For some functions of planning and development it became obvious that the watershed was neither a natural nor a logical region. It was possible that the T. V. A. would be unable to dispose of all the power to be generated by its dams within the watershed and it was difficult to determine the most appropriate area for the distri-

⁶¹ Report of War Department engineers on the navigability of the Tennessee River and its tributaries, H. Doc. 328, 71st Cong., 2d sess.

⁶² *Ibid.*

⁶³ Cf. F. A. Guthelm, *Regional Planning by the Federal Government* (Editorial Research Reports, vol. II, 1933), p. 34.

bution of power. The act, therefore, authorized the T. V. A. to sell electricity at any place within transmission distance, leaving to the discretion of the directors the actual area to be included.⁶⁴ Assuming that the economical transmission distance is about 250 miles, T. V. A. electricity might eventually reach such cities as Cincinnati, Birmingham, Atlanta, and many other places outside the watershed, but within transmission distance. The map (fig. 13) indicates a possible region for the distribution of electricity which may be generated at power sites within the Tennessee Valley watershed. The activities of the T. V. A. thus far do not indicate this as an immediate result, but the possibility remains.

Even more difficult was the problem of delimiting the area for social and economic planning. There was no sharp cleavage between the social and economic problems on one side of the watershed boundary and those on the other side. According to the act and the Executive Order No. 6161 issued in pursuance of the act, the T. V. A. is authorized to carry its planning and demonstration activities into such territory adjoining the watershed as may be "materially affected by the development consequent to" the act. This provision is broad indeed. For instance, if the distribution of electricity were carried as far as possible, the T. V. A., in accord with its planning clause, might find itself in the position of making plans for the whole southeastern part of the United States.

This lack of specificity on the part of the framers of the act not only reflected their desire to refrain from definitely delimiting a planning region, but also left the directors of the T. V. A. free to expand the realm of their planning activities geographically as they deemed expedient, and to study the problem of determining the most desirable region for planning purposes. In pursuing their activities they have already found it necessary to go outside the watershed. Tupelo, Miss., the first town to receive T. V. A. electricity, is more than 30 miles beyond the valley boundary, while contracts have also been made with other towns outside the watershed for the sale of electricity. In the study of subregions based on trade areas the boundaries seem to have little relation to the watershed proper. Research by the T. V. A. in the fields of transportation and industry also reveal the watershed as not the normal unit for planning and development purposes. The T. V. A. has used the watershed as a nucleus and has expanded or modified its sphere of activity when functional and planning activities required it; this is the express intent of the act.⁶⁵

Referring to the T. V. A.'s area, Professor Woofter has pointed out that the drainage basin "does not provide a unified region in any except an engineering sense."⁶⁶ A large part of the area is within the 'non-Negro, nontenant, non-cotton-cultivating South' while a fairly sizeable portion, in the southern and western parts of the basin, is devoted to cotton culture and has 'heavy ratios of tenants and Negroes.' Woofter further proceeds to observe that on the basis of "socio-economic indices" there are within the T. V. A. region at least seven of the major subregions of the South, namely: Blue Ridge Mountains, Tennessee Valley, Cumberland Mountains, Nashville Basin, industrial Birmingham mining area, Mississippi Ridge area, Mississippi Bluff area, Mississippi Delta area, southwestern Kentucky tobacco-cattle area, the Shenandoah Valley, and the cotton Piedmont—the last four being "partially affected."

Speaking of the national significance of the T. V. A. region and program, Professor Woofter has concluded, "for the first time the potentialities of a river system are to be treated as a unit. The requirements for power, navigation, and flood control are to be coordinated, and the experience gained will be applicable to other rivers."

It is of interest to note at this point that all of the 17 bills before the Seventy-fourth Congress proposing authorities similar to the T. V. A. were based on watersheds. However, only one included an elastic clause regarding the area for planning purposes. Two of these bills are for the purpose of increasing the area of the T. V. A. One bill would add the Cumberland watershed and another the Tombigbee watershed to the area covered by the act in all its provisions. Should these bills become law, either one or both of them, the areal problem of the T. V. A. would be considerably modified, as may be seen on the map, figure 12.

(b) *Social and economic problems.*—There are about 2,000,000 people in the Tennessee watershed with which the T. V. A. is immediately concerned, and about 4,000,000 others in the immediately surrounding territory for which the T. V. A. may assume planning functions. The T. V. A. has been directed to plan for an "orderly and proper physical, economic, and social development" for an area including 6,000,000 people. This is a broad mandate and provokes problems of a social and economic nature which will tax all of the resources of the Authority to their utmost.

The T. V. A., along with all other agencies created during the depression, was faced at the beginning with the immediate problem of alleviating unemployment.

⁶⁴ T. V. A. Act, sec. 12.

⁶⁵ T. V. A. Act, secs. 22 and 23, and Executive Order No. 6161, June 8, 1933.

⁶⁶ T. J. Woofter, Jr., *The Tennessee Basin*, *The American Journal of Sociology*, vol. XXXIX, July 1933–May 1934.

Thousands of men whose homes are in the valley had gone North to industrial centers during the period of industrial expansion and had returned to increase the rolls of the unemployed in the valley when they lost their jobs in the factories of the North. The construction projects of the T. V. A. have given employment to thousands of men, about 50 percent of whom were out of work. Closely related to the problem of employment are those of income and standards of living. The average cash income per family in many parts of the area is less than \$100 per year. To begin to remedy this situation is to open up a long list of fundamental, social, and economic problems which exist in various degrees of intensity in the Tennessee Valley.

The economic development of physical resources is naturally one of the principal planning responsibilities of the T. V. A. The Tennessee Valley is one of the Nation's most underdeveloped regions, while at the same time it is one of the richest in fertility and in economic possibilities. One day it may be one of the most populous areas in the entire country. Practically all of the factors necessary to produce a well-developed economy are present, actually or potentially. In addition to the enormous hydroelectric potentialities there are metals, coal and petroleum, chemicals, pigments, abrasives, ceramic materials, lumber, fertilizer, fertilizer ingredients, and rich farm lands. The Birmingham area has about 798,000,000 tons of iron ore, as compared with one and one-third billion tons in the Minnesota district and about one billion tons each in Sweden and Russia. According to statistics compiled by the United States Bureau of Mines for the year 1929, the total mineral production of 7 States which are in part included in the Tennessee Valley area amounted to over \$300,000,000. According to a report of the Corps of Engineers about 80 percent of the annual tonnage of the T. V. A. district proper consists of mineral products, while 10 percent are agricultural, 3 percent forest products, and only 7 percent manufactured products. The potential mineral resources of the basin and the small percentage of manufactured products indicate the opportunities for a great increase in processed products; this in turn would mean a greatly increased demand for power and an increased value of those products. At the present time the value added to manufactures by labor in the South is about one-third of that in the New England States.

The southeastern region has predominantly an agricultural economy. Rainfall and soil are the basic problems of T. V. A. planning. Howard W. Odum has appropriately characterized the southeastern region of the United States as a "deficiency area in contrast to

its abundance potentialities."⁶⁷ The Authority's greatest opportunity for constructive work is in the prevention of soil erosion, in the restoration of fertility to farms, and in the encouragement of diversified agriculture. At present, in many sections of the valley the people live on deeply eroded acreages attempting to eke out an existence. Then, too, the one-crop system of the lower valley makes the whole area completely dependent upon the ups and downs of cotton. Agricultural economists connected with the T. V. A. hold the view that diversification is desirable and feasible. The fertility of soils is rapidly depleted by unrotated cropping such as that which prevails in cotton and tobacco production. In 1929 southern farmers of 13 States purchased 70 percent of the entire fertilizer consumption of the Nation. The use of fertilizers had become general throughout the South as early as 1890. South Carolina alone in 1929 used one-eighth of the country's fertilizer consumption at a cost of one-fourth to one-third of the value of the State's cotton crop. It is therefore obvious that the prosperity of all the agricultural States, not only of those within the T. V. A. area, depends in no small part upon the production of large quantities of cheap fertilizer. The Muscle Shoals plant is the pilot plant to demonstrate the practicability of producing fertilizer cheaply through the use of electricity.

Cheap electricity is the key to the cyanamide process of producing both nitrogenous and phosphatic fertilizer. It has also been the basis of the South's movement toward industrialization. The T. V. A.'s electricity program is simply amplifying a hydroelectric expansion in the South which was already well started. Rupert B. Vance, in his *Human Geography of the South*, has called water power "the one unifying force underlying industrial development in the Piedmont Crescent." Although the South has only 7.6 percent of the country's potential power within its borders, it possesses 20 percent of the developed power. Since 1908 water power development has tripled in the South, while the balance of the country has merely doubled its horsepower. In 1926, the peak year, 61 percent of the Nation's water power gains were in the South.⁶⁸ Moreover, according to Robert Bruere, "There is more than three times the ultimate power to be reached on the Muscle Shoals project and twice the primary horsepower developed by 1923 east of the Mississippi and south of the Ohio."

⁶⁷ Howard W. Odum, *The Regional Approach to National Social Planning* (issued by the Foreign Policy Association, 1935); see also Rupert B. Vance, *Regional Reconstruction: A Way Out for the South* (also issued by the Foreign Policy Association, 1935).

⁶⁸ Cf. F. A. Gutheim, *op. cit.*

Soil-erosion control looms large in the program of the Authority. It is closely related to the planned development of agriculture, forestry, and water control. The prevention of erosion also has a direct influence on navigation and flood control. It constitutes a middle ground in the program between the activities of the Authority and the realization of its objectives; it is an objective in itself and also the means to the achievement of other objectives.

Transportation is a problem of considerable concern to the T. V. A. and one which it has found difficult, if not impossible, to study within the limits of the watershed. With the one exception of waterways, transportation media—rail, highway, and air—cross and recross, enter and leave the watershed, largely unamenable to coordination within that area. Another aspect of the transportation problem is the freight rate structure. Rates from points in the valley to other places are entirely inconsistent with comparable distances in other parts of the country. For example Knoxville, Tenn., within the valley and Syracuse, N. Y., outside the valley, both ship the same product to Columbus, Ohio. While Knoxville is closer to Columbus, its freight rate is one and a half times that of Syracuse to Columbus.

The T. V. A.'s activities cannot be divorced from those of general governmental functions. The older political functions enter into T. V. A. plans as auxiliary problems influencing economic and social development. For example, health standards and sanitation need to be improved. Malnutrition causes a predisposition to tuberculosis and pellagra; the malaria problem is not yet mastered. The T. V. A. is interested, of necessity, in problems of constitutional, administrative, and taxing structure in the State and local governments of the region. Through its studies the T. V. A. has already focussed attention on the obsolescence of certain constitutional provisions and basic laws which result in waste and ineffectuality. Research has been directed particularly to county consolidation and the possibility of simplifying local government. As the principal resident of the region and as the greatest spending agency and source of the largest potential revenue for State and local governments, the T. V. A. cannot escape the necessity of cooperating with other governments in an effort to improve governmental machinery and methods.

(c) *Principal purposes of the T. V. A.*—The main purpose, or what might be called the over-all planning purpose of the T. V. A., as stated in the act and expressed in the statements of President Roosevelt and the T. V. A. directors, is to "foster an orderly and proper physical, economic, and social development of

the area." This general inclusive purpose comprehends those more specific purposes of operation of Government property at Muscle Shoals, development of agriculture and industry, improvement of navigation, control of flood waters, promotion of the use of electricity, and the making of studies and plans to aid the proper use, conservation, and development of the natural resources of the region. In other words, the main purpose of the T. V. A. is to carry on a cooperative development looking toward the infusion of intelligence and planning into the utilization of the resources of a region for the mutual benefit of the people of the region and the Nation. The accompanying chart shows the relation of planning activities to the objectives of the T. V. A. (see fig. 9 A).

(d) *Proprietary powers.*—While the T. V. A. Act is somewhat vague as to the exact definition of its many purposes, it is more specific as to ways of accomplishing these purposes. The major powers consist of the authorization to make plans, construct dams, power plants, and transmission lines; to make and sell fertilizer and fertilizer ingredients; to produce and sell electricity; to acquire real estate and other property; to exercise the right of eminent domain; to request the advice and assistance of any Federal office or establishment; to establish, maintain, and operate laboratories for research; to make fertilizer and other demonstrations; and to cooperate with national, state, county, city, and other agencies for the purpose of carrying out the provisions of the act. These are broad powers and give to the T. V. A. a freedom of action that is not present in the older departments of Government.

(e) *Realms of persuasion.*—Even with these broad powers expressly granted, the T. V. A. must rely, in addition, upon supplementary powers if its major purpose is to be realized. Certain projects can be developed independently, such as an integrated electric grid system for the entire valley. The control of flood waters and certain improvements to navigation may be accomplished entirely by the efforts of the T. V. A. In order to accomplish the more far-reaching purposes of planning, however, the T. V. A. must, through its demonstrations and contacts, so motivate the people that they will engage in active participation in the work fostered by the T. V. A. Demonstrations of new methods of pursuing agriculture must find their result in the adoption of these methods by the farmers of the region. Industrial research must eventuate in the private and cooperative development of new industries. An increased supply of cheaper electricity must find a market. The health work of the T. V. A. must be shared by existing agencies and officials and an interest

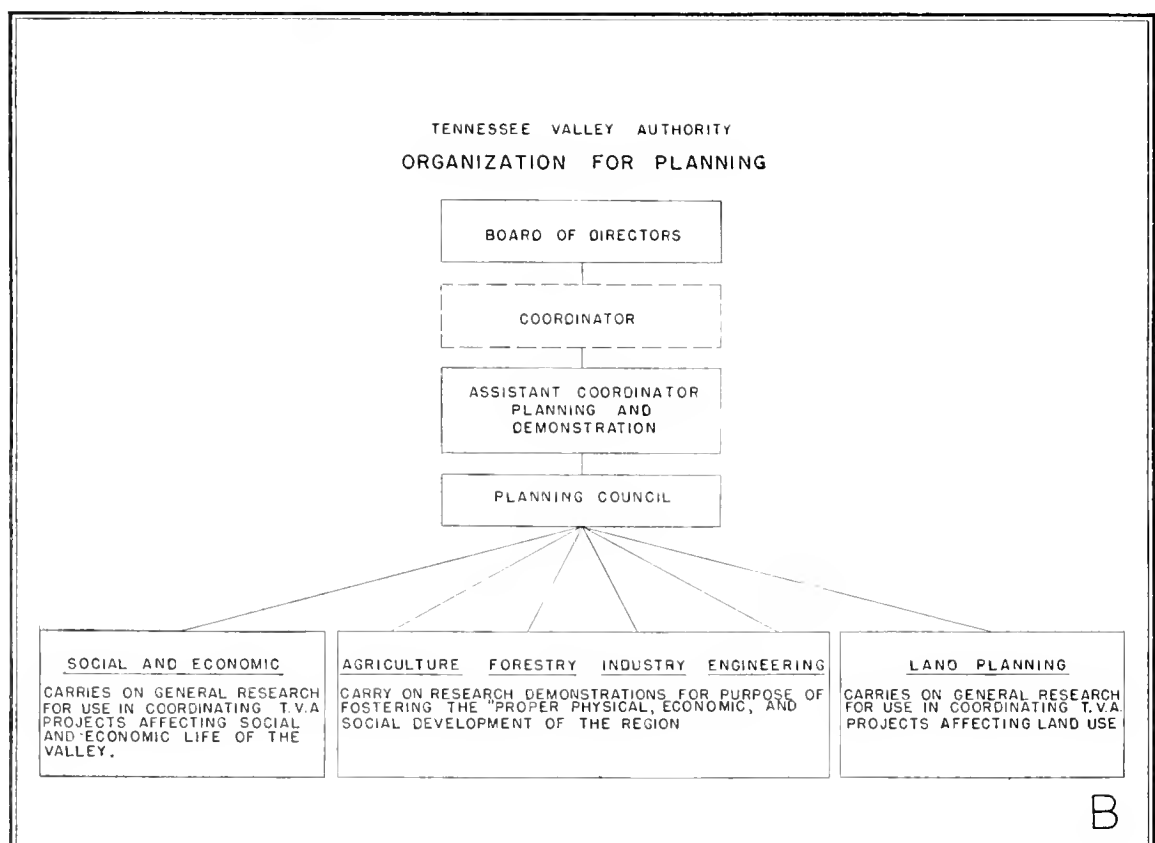
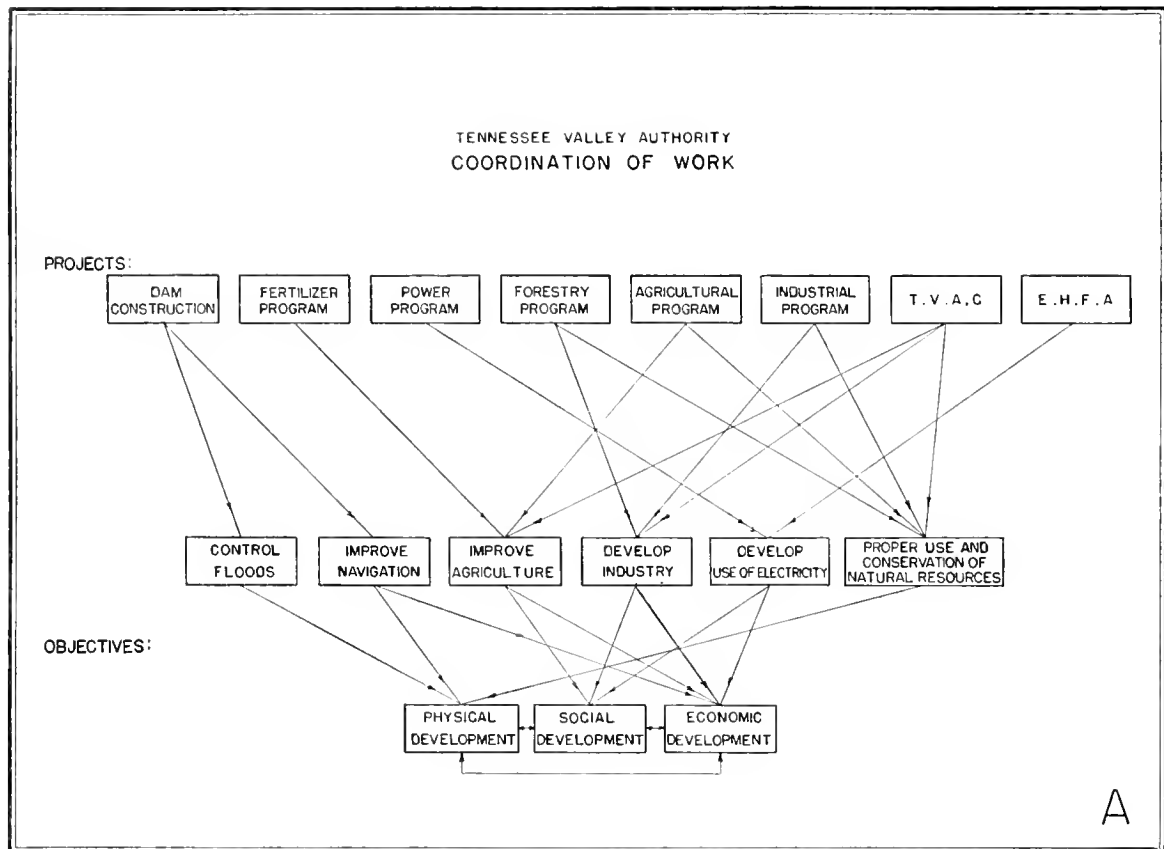


FIGURE 9.

in improved health must be developed in the inhabitants of the region. Likewise, in many of its functions the T. V. A. can make studies and develop plans and carry them into the realm of demonstration. The actual acceptance and carrying out of a planned social and economic order will come only through the desires and active participation of the people of the valley.

In order to bring the people of the region into closer contact with the work of the T. V. A. two associated corporations have been formed.

The E. H. F. A. (Electric Home and Farm Authority) is a corporation created by Executive order and financed by the F. E. R. A. for the purpose of promoting the wider use of electricity through increased use of electrical appliances. Its objectives are to improve the quality, decrease the cost, and finance the purchase of electric appliances. The E. H. F. A. is authorized to do business in any State but has confined its activities thus far to the Tennessee Valley area.

The T. V. A. C. (Tennessee Valley Associated Cooperatives) is a corporation financed by F. E. R. A. funds and intended "to promote, organize, establish, manage, finance, coordinate, and assist in any way whatsoever in the development" of cooperative enterprises in the Tennessee Valley area. Through the efforts of this organization several cooperatives have been formed. Most of these have received loans and guidance from the T. V. A. C.

Each of these two corporations is administered by a board of three directors who are also the directors of the T. V. A.

In the Tennessee Valley one function leads naturally to another; all derive from the water problem. Heavy rainfall causes erosion; reforestation, dam-building, and soil-erosion measures are therefore necessary. When the topsoil is permitted to be washed away it must be restored and more amply fertilized. The building of dams improves navigation by helping to prevent the filling up of stream beds with silt. Stored pools of water also improve navigation and, when allowed to drop past turbines, provide large sources of hydroelectric energy. A restored agriculture and cheap electricity provide the foundation for industry and a balanced economy.

(f) *Administrative units dealing with planning.*—Of the twenty-odd divisions carrying on the work of the T. V. A., six are engaged in planning and demonstration activities. The planning council, an advisory group, is composed of the heads of these six divisions, the assistant coordinator for planning divisions, and the heads of the electricity department, engineering and

construction department, and the fertilizer department. The board of directors through its formulation of objectives and approval of expenditures for various projects also performs a planning function. These units and their relationship to one another are shown on the chart, figure 9B. Let us attempt to get a fairly complete picture of these planning activities before considering the net effectiveness of the planning program.

The agricultural division.—This division conducts surveys, studies, investigations, and farm demonstrations incident to improvement of agriculture and balancing of agriculture and industry. It is cooperating with State and Federal agencies in demonstrating, in different parts of the valley, a proper soil-management program which will control erosion, thereby aiding in navigation and flood control. Demonstrations in terracing, rotating crops, and the proper use of new and existing forms of fertilizer are also being carried on. County erosion clubs have been formed under the guidance of the agricultural division. Work in soil classification is also being carried on as a basis for the delineation of agricultural land area. Studies which are being made deal with the effects of various types of fertilizer on the main types of soils existent in the valley; the discovery of new farm enterprises and new methods of farming, including new crops, more efficient practices of livestock breeding; rural electrification; market opportunities; cooperative organizations; prices of agricultural commodities; irrigation; and drainage.

The forestry division.—This division plans and supervises forestry work in cooperation with the United States Forest Service, the Civilian Conservation Corps, and the State forest services. It is carrying on a land-classification program to discover those areas in which forest cover does or should play an important part in controlling silting and excessive run-off, which, if unchecked, will materially increase the damage from floods and will hinder navigation. Forest planting stock is being produced for use in reforesting the eroded lands in the valley. Educational work in forestry is being carried on throughout the valley in order to acquaint the people with the values and benefits to be derived from the scientific planning of the use of their lands, to stimulate an enlightened attitude on conservation, and especially to show the part that forestry plays in the development of the valley. Technical supervision is being given to the work of erosion control carried on by the C. C. C. camps in the area. Experiments are also conducted in the growing of crops on trees and the developing of new strains of trees valuable for food for men and animals. Food-producing trees are

being supplied for inclusion in reforestation work, and crop trees and shrubs for ornamental purposes are being developed.

The industry division.—This division makes industrial surveys, studies, and investigations leading to the development of a balanced program of industry. County surveys including data on geography, topography, climate, agricultural products, transportation facilities, industrial resources, and governmental activities have been completed for most of the counties in the area and work is going on for those counties not yet completed. Several studies on the development and utilization of southern materials and valley products are being made, such as development of electrical equipment and machinery, insulating materials, mineral products, reversed cycle heating, and portable housing. Technical studies are being made to determine what manufacturing industries can operate efficiently in small units. Research dealing with the possibility of developing an improved ceramic industry is being carried on. Studies have been begun relating to the economics of transportation—rail, water, highway, and air—in the valley. This survey involves the collection of data relating to markets, accessibility to raw materials, feasibility of water transportation, analysis of freight rate structures, and the possible coordination of existing transportation facilities.

The engineering planning and geology division.—This division conducts engineering investigations and surveys, plans for the development of water resources, and compiles basic engineering and geological data. Much of this work is done in connection with the construction of dams and power plants. Navigation studies have been started in an effort to determine the effect of power development at Wilson Dam (Muscle Shoals) on navigation on the Tennessee River below the dam and the need for additional construction to insure satisfactory navigation. A general mapping program, including aerial maps of the entire watershed, planimetric maps, horizontal control maps, and many maps of different parts of the valley, is now under way.

The land-planning division.—This division prepares regional plans for the utilization of lands and furnishes architectural services to other divisions of the T. V. A. A comprehensive valley-wide land-planning project has been outlined and work has been started on various parts of the plan. This project includes a land resource inventory embracing information on highways, transportation, private and public improvement, transmission lines, and census material affecting the occupancy pattern of the valley. A land-use study has been started which includes the assembling of all current proposals for land use from Federal and State agencies,

investigation of commodity sources and distribution, recreational planning, and industrial studies. Research is also being carried on relating to regional and community planning, including principles of land subdivision, utility layout, and diagrams of transportation media.

The social and economic division.—This division conducts investigations and carries on research pertaining to immediate and specific social, educational, legislative, and governmental problems, especially as related to projects of the Authority. Specific projects include a study of the families to be moved from the flooded areas and problems incident thereto, a study of the best form of government for the town of Norris, a study of volume of goods actually being consumed and the volume necessary for a particular area for a definite standard of living, and health research in industrial hygiene, malaria control, and other health problems bearing on the projects of the Authority. This division is also carrying on a training program for the employees of the T. V. A., including work in trades, agriculture, and general education. In connection with the purchasing program of the Authority, studies have been made of the steel price structure of the Birmingham area, and also of prices in the cement industry; in other words, basic and emergency investigations are carried on side by side; these studies range all the way from archaeology to psychology.

The planning council.—This council has been in operation for about 6 months. It has no administrative functions. At the outset meetings were held regularly for the interchange of information between individuals responsible for the execution of planning activities; regular meetings have now been discontinued and instead the group is called together from time to time as desired. Recently a committee of the group has been conducting hearings at which division heads have appeared to outline their proposed plans for immediate and long-time planning projects. It is the present intention of the planning council to synthesize and coordinate these divisional proposals into an integrated plan and working program for the T. V. A., to make recommendations to the board from time to time, and generally to assist the board in its planning functions.

(g) *Coordination of planning activities.*—A general understanding of the lines of administrative control and responsibility is necessary to a clear understanding of the planning activities of the T. V. A. and their coordination. According to the act, "The board of directors of the corporation shall be composed of three members, to be appointed by the President, by and with the advice and consent of the Senate. In appointing the members of the board the President shall

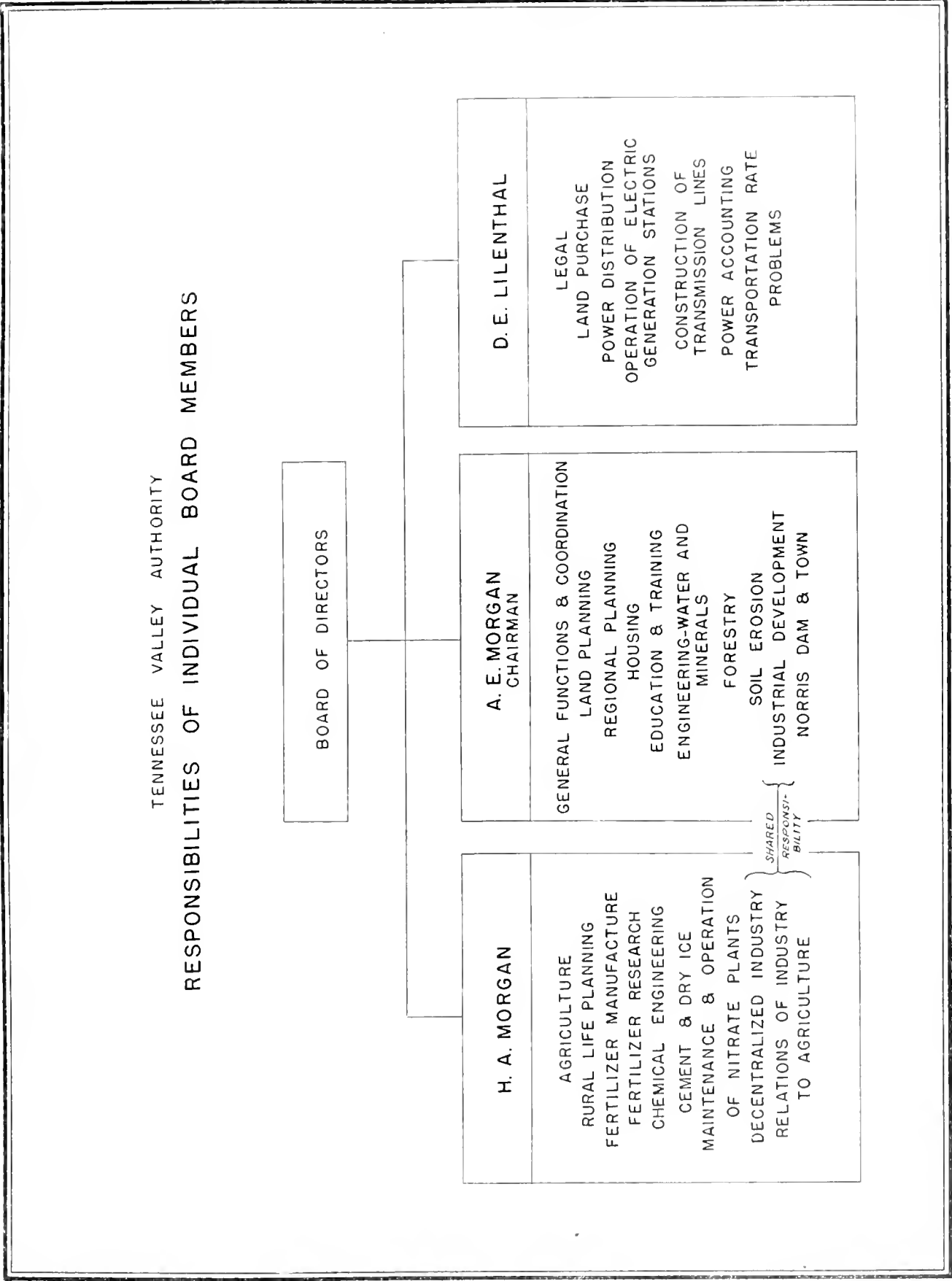


FIGURE 10.

designate the chairman." Further, according to the act, any two members of the board shall constitute a quorum. The only provision of the act prescribing the functions of board members is that "The board shall direct the exercise of all the powers of the corporation." No provision is made distinguishing the responsibility of the chairman from that of other board members, nor is there any provision which recognizes or authorizes the designation of one administrative head of the Authority. No provision is made for the appointment of any subordinate officers to exercise specific duties, except as the board is authorized to appoint and remove "such managers, assistant managers, officers, employees, attorneys, and agents as are necessary for the transaction of its business." No provision is made defining the type of function to be carried on by the board members.

This absence of specification as to the functions of the board members and their future organization left them free to work out these problems as they saw fit. The background of the individual board members led them to be interested primarily in those problems which related to their former occupations. Accordingly, in September of 1933, a few months after their appointment, they formally adopted, as a board, a resolution allocating specific duties and administrative responsibilities to themselves, individually, as follows:

Arthur E. Morgan, chairman of the board, is delegated to supervise all matters concerned with the Norris Dam and reservoir and town at Cove Creek; land planning and regional planning, including subsistence homesteads (except agriculture), and housing; educational and training program, other than agriculture; engineering, including studies, plans and constructions for the control of the use of water and mineral resources (except Muscle Shoals Dam and power house and electrical transmission and distribution) and matters concerning raw material for fertilizer; social and economic organization and planning; forestry, soil erosion and conservation methods (tentatively), and will share with Dr. Harcourt A. Morgan matters relating to industry, especially relating to training for industry and its association with cooperatives, besides administration of general functions and coordination of a unified program.

All matters relating to agriculture are placed in charge of Dr. Harcourt A. Morgan. This includes rural life planning and matters relating to localized industry and its relation to agriculture. In addition, Dr. Harcourt A. Morgan will direct the design, construction and operation of smelters for phosphorus and for potash; a research program in the nature and behavior of fertilizers; the purchase, blending and sale of fertilizers; a chemical engineering department and the program of research and development in the manufacture of fertilizers, cement and dry ice; maintenance and operation of Nitrate Plant No. 2 at Muscle Shoals; plans for a cement plant.

Besides being in charge of the legal department and all land appraisal, purchase and condemnation, David E. Lillenthal will look after the distribution of power including relations with purchasers and prospective purchasers; all matters relating to the operation of the hydroelectric and steam-

electric plants at Muscle Shoals; construction and operation of transmission lines; development of standardized accounting methods for power generation, transmission and distribution and the supervision of power accounting for the Authority; proposals to exchange power for power sites; and transportation rate problems.

This does not mean that the individual directors will formulate policies for their separate divisions. The board as a whole will continue to adopt all policies. It will be the duties of the directors to see that the board's projects are carried out in their respective channels.

A chart showing this administrative arrangement will be found in figure 10. No action to rescind this allocation of duties has been taken, except as to land appraisal and purchase, which is now handled by the coordinator's office. Under this arrangement the board members have been acting in a dual capacity. As a board they formulate the policies of the Authority, while as individuals they are responsible to themselves as the board for the execution of these policies. The situation might be described as one in which three coordinate administrators of the T. V. A. program constitute the policy-forming board for that program. Besides their work in formulating and executing the policies of the Authority, heavy demands have been made on the time of the directors for public and official contacts in connection with their work. This assumption of a heavy triple burden on the part of the directors provokes some doubt as to whether their primary functions of planning and formulating policies will receive an adequate proportion of their time.

The need for centralization of certain functions of office procedure and other routine administration developed very early in the life of the T. V. A. To aid in executing his functions as coordinator, the chairman set up the office of coordinator to take care of these problems, and this office has gradually become the coordinating office of the Authority, reporting directly to the board as a whole. This staff has been growing continuously; the chart figure 29 indicates the present organization of the coordinator's office.

There are two assistant coordinators, one for management services such as personnel, finance, purchasing, legal counsel, and information, and another for planning and demonstration services: agriculture, industry, land planning, forestry, engineering planning, and social and economic planning. The heads of the divisions performing management services constitute the management council with the assistant coordinator for management services acting as secretary. A planning council composed of heads of divisions performing planning and demonstration services is set up with the assistant coordinator for these services acting as

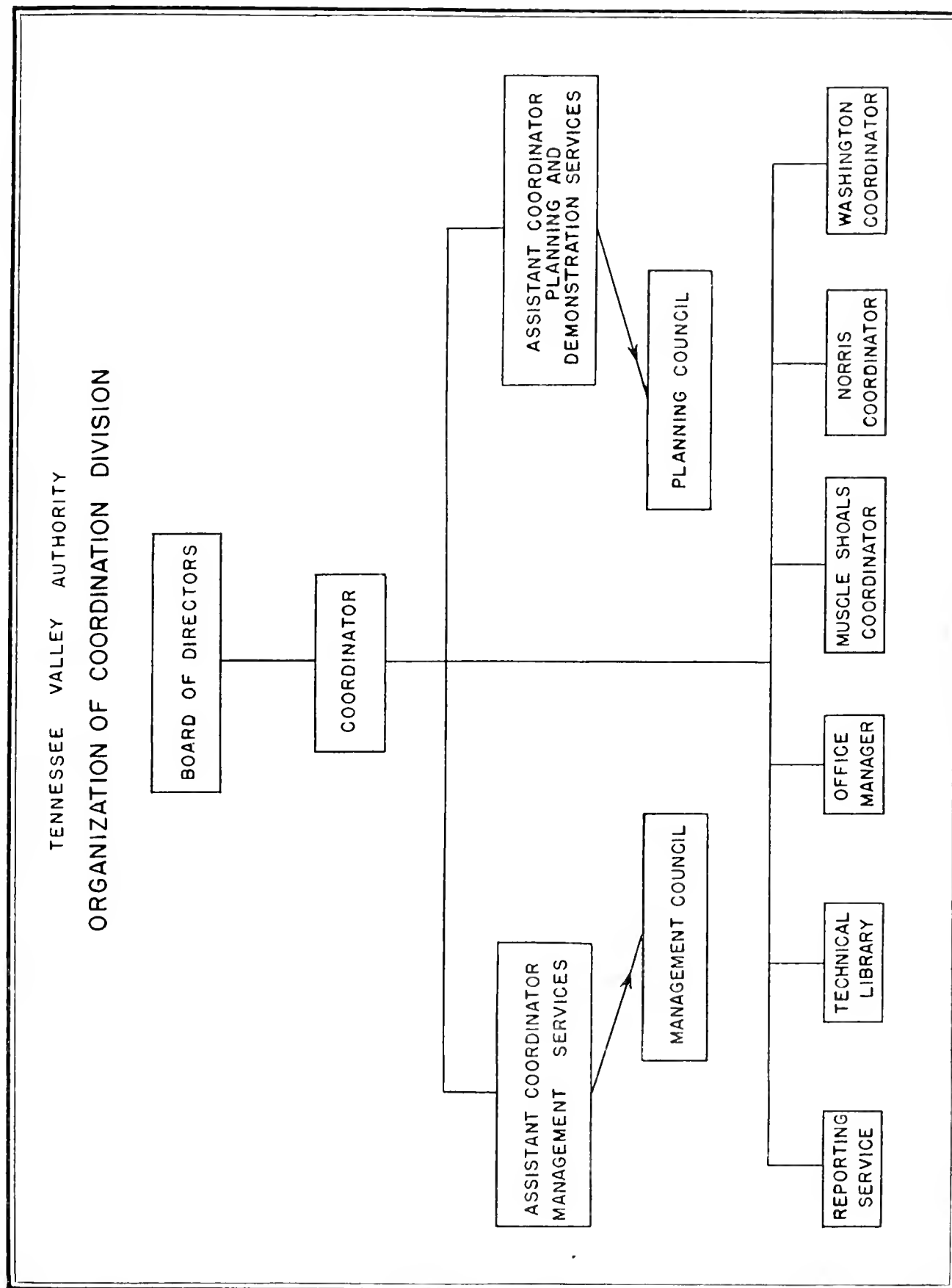


FIGURE 11.

secretary. The coordinator is nominally the chairman of both councils. The relationships of the coordinator and his staff to division heads are of a purely informal character. There is no element of administrative authority. The coordinator is charged, however, with definite responsibility for maintaining relations with the T. V. A. offices at Muscle Shoals, Norris, and Washington, D. C., and has representatives at these points. He is also responsible for problems of office management throughout the T. V. A. organization and a reporting service which develops motion pictures of T. V. A. activities and edits its publications.

While the coordinator has been given definite administrative responsibility for these functions, he has no official responsibility for coordinating the working programs of the Authority. This remains the province of the directors, individually, and collectively as the board.

This situation regarding general coordination also holds true as regards the coordination of the planning functions of the T. V. A. The planning council may perform a valuable function through its ability to foster cooperative discussions by those responsible for various parts of the Authority's program; it may also bring together statements of proposed projects and plans, and coordinate these proposals into a more all-inclusive proposal for T. V. A. activity; but the final responsibility for planning and for administrative coordination of the work of the Authority remains with the directors.

As yet the board has not officially formulated general or long-time plans for the T. V. A. The procedure thus far has been to concentrate on the more specific purposes and activities in the belief that a general plan will evolve in the process of specific development programs. There are valid reasons for believing in the efficacy of this procedure. In the first place, plans originate with division heads—with the man in charge of the electricity or agricultural planning, for instance, with the man on the firing line. The functional head draws up his year's program, or his 5- or 10-year's program. The next integrating stage is reached in the budgetary process; the year's estimates for projects and divisions must be drawn up. The T. V. A. has now drawn up estimates (which are in reality plans or work-programs) for a 5-year period. This procedure takes the form of hearings conducted by the comptroller's and coordinator's offices and attended, seriatim, by department and division heads. At these hearings programs are explained and justified. During the first 2 years of its existence it is probably no exaggeration to say that the budgetary estimates constituted the most effective form of integrated planning.

This procedure does not differ materially from planning in business or in government. The administrative officials, or the general manager in industry, point out what needs to be done or what it is hoped will be done. It is then up to the board of directors or the legislative body to sift, reject, compromise, and coordinate the proposals entering into the program as a whole. To be sure, members of boards and legislative bodies sometimes develop original ideas of their own; the directors of the T. V. A. have never been accused of having fewer ideas than other men in responsible positions. But proposals that come up from the ranks and that represent the experience and intelligence of men on the firing line are likely to be among the basic element of a sound plan.

Another reason that complete blueprints of social and economic development probably have not been produced by the T. V. A.'s board of directors up to the present time is that it would be poor strategy. There are already too many hostile interests and skeptical people who accuse the T. V. A. of utopian dreaming or of rigid regimentation. To indiscriminating persons any planning whatsoever may seem to be regimentation. They want to take a through train but do not realize that this requires some regimenting of small independent railroad systems. The announcement of plans too far in advance of the possibility of their effectuation often has the effect of supplying ammunition to selfish interests and opponents of cooperative activity. On the other hand, actual examples of accomplishment educate the people to the greater programs which are possible; then, once the effective demand and support are created, the unfolding of plans and programs can proceed without let or hindrance.

But are there larger plans being developed in the thinking of the T. V. A. officials? Plans should be based upon research—and a great deal of this is being done in many divisions of the T. V. A. Then, too, possibly the greatest handicap the T. V. A. faces in its planning program is lack of precedent and experience in regional planning. The hesitancy to formulate and announce specific and long-time plans is undoubtedly accounted for in large part by the extreme difficulty of making proper plans relating to a whole region and bearing upon all aspects of social and economic life. Two years is not a very long time in the life of such an ambitious venture. Very little educational groundwork had been done before the T. V. A. arrived on the spot. Local interests had not been educated and organized. Another regional authority would be able to start with an immense advantage. The Board is at the present time, however, conducting hearings for the purpose of going over the

detailed proposals for a 5-year plan of activity with a view to establishing a point of reference for future projects and in order to develop a picture of financial needs for a 5-year period. The staffs of the coordinator and the comptroller are preparing reports for these hearings.

(h) *Evidences of Planning Success and Social and Economic Progress.*—The T. V. A. is already beginning to see the fruits of its labors. In the field of water control three dams have been started as units in the chain of dams, which will provide adequate control of flood waters in the Tennessee Watershed as well as improved navigation and an integrated power-generation system. Two of these three dams are more than 50 percent completed, and water is already being impounded behind one of them. The development of this system of dams is not haphazard, but grows out of extensive and thorough-going studies for the development of a unified water-control program.

The soil erosion control work initiated by the Authority has been expanded many times by the formation of county erosion control clubs and associations which have purchased terracing and other equipment and have set to work on a wide front to check the hitherto flagrant waste of the rich top soil on many parts of the area. Through the advice and leadership of the T. V. A. the C. C. C. camps in the area have built innumerable check dams as another attack on the problem of soil-erosion control. Still another effort to prevent soil erosion is that of the Forestry Division of the T. V. A. which is cooperating with the C. C. C. camps in its work of afforestation on lands unsuitable for agricultural development. An inclusive policy and program for soil protection is being consciously evolved, based upon a large program of research and experiment.

In the field of agriculture the T. V. A. is helping the farmers of the area to improve their crops and methods by demonstrating, on various farms throughout the valley, the values of proper farm management, including the advantageous use of fertilizers, methods of crop rotation and use of improved farm machinery.

Industrial research is developing new industries, products, and manufacturing processes which may form the basis of widespread industrial development in the area. Among the contemplated industries which seem suitable for development in this area are ceramics and potato starch manufacturing. A large percentage of the products of these two industries now consumed in this country are imported from abroad. The utilization of the electric power which will be developed, along with the use of the vast mineral resources, is being planned in connection with the establishment of electro-chemical industries. Auxiliary to

the work of industrial development is that of planning for the coordination of the various transportation media in the area.

The electricity program, in spite of court injunctions, has made considerable headway. The Authority is now serving 7 towns, 2 county associations, and 3 State districts with T. V. A. electricity. The citizens of Knoxville, Memphis, and Chattanooga, three of the largest cities in the area, and of many smaller towns have voted to receive T. V. A. power. In addition to the main transmission line between Wilson and Norris Dams, which is now under construction, and a few smaller lines which have been completed, work is going ahead on other lines which will eventuate in a grid system capable of supplying electricity to homes, farms, and factories within the watershed and adjoining territory. Through the activities of the E. H. F. A. sales of electrical appliances have greatly increased while prices have decreased.

In the town of Norris the T. V. A. has realized several of its objectives. The planning of the town from a practically uninhabited area to the finished product has demonstrated the possibility of future developments in town planning, efficient government, electrical heating of homes, and aesthetic municipal development.

In projects of physical development and public works which have been undertaken the T. V. A. has endeavored to combine both efficiency and beauty. For example, the building of the Norris freeway, a new type of highway which got its name from being free of offensive roadside developments such as billboards and shacks, as well as steep hills and sharp curves, points the way to the type of development which may spread over the whole area. Another striking example is the effort which has been made to introduce beauty effects into the construction of the Norris Dam, such as the highway along the top and the unusual lighting effects which will make the dam and powerhouse a striking picture at night.

In the fields of social and economic planning many accomplishments deserve mention. One of the most outstanding is the T. V. A.'s work in improving health and sanitation conditions. In cooperation with C. W. A. labor the T. V. A. has carried on an important program of field work in malaria control and sanitation. In areas to be flooded by dams the T. V. A. has been very successful in helping families which must abandon their homes to resettle in new locations under more satisfactory conditions. A large number of T. V. A. employees have had the opportunity to benefit themselves through the general and vocational training programs of the Authority and several thousand have availed themselves of this opportunity.

This program has reached a large percentage of the workers on construction projects and through them, many employees' families. Thus, in effect the training program reaches into local communities, cooperating with local agencies and organized groups in its attempt to build up local leadership. The real test of the effectiveness of the program will come, of course, in the years following completion of specific construction projects after trainees have returned to their local communities. These ex-trainees should provide an excellent medium through which the various local and State agencies in agriculture, education, and home management focalize their own programs. Efforts are now being made to assure this carry-over value through the approach made possible in the various training centers.

Not the least of the T. V. A.'s planning successes and accomplishments is its record of effective cooperation with governmental units, Federal, State, and local. This question will be discussed in the following section.⁶⁹

3. Intergovernmental Cooperation as Exemplified by the T. V. A.

One of the most important problems arising from the creation of the T. V. A. has been that of the relations of the new agency to existing Federal, State, and local governmental bodies operating in the Tennessee Valley area. Many of the latter had been and are dealing with matters falling within the scope of authority of the T. V. A., and the dangers of duplication as well as the possibilities of cooperation, have therefore presented themselves. It is obvious that the success or failure of a regional authority like the T. V. A. depends in large part upon effective collaboration with preexisting governmental units. The T. V. A. directors and officials have been fully aware of this fact, as the record shows.

With reference to Federal agencies, the T. V. A. Act expressly authorized the board of directors "to request the assistance and advice of any officer, agent, or employee of any executive department or of any independent office of the United States, to enable the corporation the better to carry out its powers successfully, and as far as practicable shall utilize the services of such officers, agents, and employees." The act further authorized the T. V. A. "to cooperate with national, State, district, or county experimental stations or demonstration farms, for the use of new forms of fertilizer or fertilizer practices during the initial or experimental period of their introduction" and to "coop-

erate with State governments, or their subdivisions or agencies, with educational or research institutions, and with cooperatives or other organizations, in the application of electric power to the fuller and better balanced development of the resources of the region." Section 22, authorizing the President to make surveys and plans for the "general purpose of fostering an orderly and proper physical, economic, and social development" of the Tennessee Valley, provides that "the President is further authorized in making said surveys and plans to cooperate with the States affected thereby, or subdivision or agencies of such States, or with cooperative or other organizations, and to make such studies, experiments, or demonstrations as may be necessary and suitable to that end." By an Executive order of June 8, 1933, the powers granted the President under section 22 of the T. V. A. Act were delegated to the Board of Directors of the Authority.

With these clear mandates for cooperation, the T. V. A. began its work, and today is carrying on a multiplicity of activities, most of which are of direct and immediate interest to one or more other governmental agencies dealing with indetical or similar problems in the valley area. That T. V. A. officials are fully alive to the need for cooperation, and the many benefits to be derived therefrom, is evident. In his communication to the President, May 10, 1934, Chairman Morgan made the following statement:

In cooperation with the educational, health, highway, public safety, and other authorities of the Federal Government, and of the States of the Tennessee Valley area, the Authority has undertaken to promote common understanding and common effort to work out solutions to the common problems of the region. These efforts to bring about cooperation should continue.

The Director of the Personnel and Social and Economic Divisions of the T. V. A. has stated:

I have further attempted to show how essential it is in undertakings such as these that full cooperation of national, State, and local agencies be secured. It is through the interest and combined efforts of these agencies that the social development program will fail or succeed.

To mention only one more illustration, the Director of the Land Planning and Housing Division of the T. V. A., in advocating the assembly of all plans and proposals, Federal, State, and Local, dealing with land use in the valley, has explained that "this work is designed to insure that differing proposals for physical improvement, both from within and outside the T. V. A., will not be nullified by lack of coordination among the programs affecting this area."

The best examples of intergovernmental cooperation in the Tennessee Valley region may be seen in the passage of legislation by the two States most directly

⁶⁹ For further accomplishments of the T. V. A., see the National Resources Committee's study entitled "Division of Costs and Responsibilities for Public Works", ch. 15.

affected by the T. V. A. development, namely, Tennessee and Alabama, with a view to closer cooperation with the Federal agency. The T. V. A. has had the wholehearted support of the Tennessee State administration under Governor McAlister. Speaking in behalf of 12 bills favored by the T. V. A. and in the drafting of which the Authority played a part, Governor McAlister said:

The first five of these acts deal primarily with conditions affecting immediately the work of the T. V. A. and the others are enabling acts designed to give the State, its counties and cities and towns the benefit of the planning board activities of the National Government, both through the work of the T. V. A. as well as in other ways. It is unnecessary for me to emphasize at this time the importance of thorough cooperation between the State of Tennessee and the various counties, cities, and towns on the one hand, and the T. V. A. on the other.

The Tennessee Valley Commission,⁷⁰ created by a resolution of the Tennessee Legislature to represent the State in all matters pertaining to the development of Muscle Shoals and the Tennessee Valley and to cooperate with the Federal Government, supported all the T. V. A. bills and said further:

It is not unlikely that additional supplemental legislation will be recommended by us for passage before the end of the present session of the legislature to cooperate further with the T. V. A.

The 11 bills which passed the legislature and became law take away the jurisdiction of the State railroad and public utilities commission over the T. V. A., facilitate the acquisition by cities and counties of electric distribution plants for T. V. A. power; and authorize, in addition to a permanent Tennessee State Planning Commission, regional and municipal planning and zoning agencies. Governor McAlister has encouraged the cooperation of the State administrative departments with the T. V. A. wherever possible. However, financial reasons have prevented the State from entering into many of the phases of the T. V. A. program.

In 1933, the Alabama Legislature, just before the T. V. A. Act was passed by Congress, enacted three laws authorizing counties, cities, and towns to construct and operate electric-light plants, power plants, transmission lines, and power-distributing systems, and to borrow money for acquisition of power "from the United States Government or other publicly owned power stations such as that now located at Wilson Dam, Ala." Also, the first Alabama law enacted in 1935 exempted "certain Federal agencies, instrumentalities, and corporations", under which classification the T. V. A. appears, from the jurisdiction of the Alabama

Public Service Commission. The T. V. A. has assisted in the preparation of public works bills, subsequently passed by the Alabama Legislature, such as those dealing with power distribution, nonprofit utility corporations, a State rural electrification program, and municipal improvement authorities. Governor Graves has advocated close cooperation with the T. V. A. not only in matter of legislation but on the part of all departments and divisions of the State government.

Contacts of the T. V. A. with other governmental administrative agencies are of several types, which are by no means mutually exclusive. The first type of cooperation consists of exchange of data and information, which has taken place in far too many instances to enumerate. Dozens of Federal bureaus, particularly in the Departments of Agriculture and Interior, have been called upon by the T. V. A. for data or advice relative to problems of the Authority, and cheerful assistance has been rendered wherever possible. On the other hand, information compiled by the T. V. A. frequently has been made available to Federal bureaus and agencies, and has expedited their work.

In the second place, contacts providing for financial assistance have been established, with the T. V. A. sometimes the recipient, frequently the donor. Such arrangements are usually entered into in order to utilize existing facilities, and to prevent duplicatory organization. The T. V. A. has been helped by the F. E. R. A., P. W. A., C. W. A., and T. E. R. A.; while examples of the opposite relationship are seen in T. V. A. help to assistant county agents for erosion control and farm management demonstration, T. V. A. financing of fertilizer and other types of research being carried on in the State agricultural experiment stations, and T. V. A. allotments of over \$250,000 for mapping work to be directed by the United States Geological Survey.

In some instances, the T. V. A. has a direct cooperative set-up with other agencies, and work is being carried on jointly by representatives of the several bodies. Examples of this relationship are found in health and sanitation work, where several representatives of the United States Public Health Service have been detailed to cooperate with T. V. A. and State officials; in the attack upon erosion being jointly conducted by the T. V. A., the United States Forest Service, the Civilian Conservation Corps, the experiment stations, and the county agents; in the agricultural demonstration work in which the T. V. A., the Department of Agriculture, and the State extension services are cooperating; and in various survey and research projects.

Generally speaking, a spirit of cooperation has motivated the T. V. A. in the conduct of its many programs, and at the present time numerous contacts

⁷⁰ Designated by the Governor, April 11, 1934, as the Tennessee State Planning Board.

with other administrative agencies of Government are maintained. Through representation on the National Emergency Council, the T. V. A. has been able to join in the work of that body looking toward effective coordination of the programs of all Federal agencies. In a few instances, the T. V. A. program has met with a certain amount of suspicion, being viewed as a possible encroachment upon other jurisdictions. It may fairly be stated, however, that after 2 years of activity, these suspicions have almost entirely disappeared, and the possibilities of even closer cooperation in the future are in evidence. The most important relations with other agencies may be described by referring to the major T. V. A. programs from which they arise.

(a) *Water control program.*—The T. V. A. has benefited from the cooperation and assistance of the corps of engineers of the War Department. As stated in its annual report for 1934:

The first action of the Authority was to make contact with the Secretary of War and with the corps of engineers at the St. Louis office, where plans for the Cove Creek (Norris) Dam were being prepared; at the Chattanooga office, from which surveys for that dam were being directed; at Muscle Shoals, where the Wilson Dam and power plant and the nitrate plants are located; and at the Washington office of the corps, with reference to increasing the height of the navigation lock being constructed at the site of the Joe Wheeler Dam.

Preliminary plans for the Norris Dam were received from the War Department in July, and in August 1933 most of the personnel engaged in field surveys in that area was taken over by the T. V. A. Many valuable studies completed by the corps of engineers have been turned over to the Authority. These records include all of the earlier studies of the geologic characteristics of the various dam sites in the basin, as well as navigation studies of other river systems. The report of the corps of engineers on *Tennessee River and Tributaries, North Carolina, Tennessee, Alabama, and Kentucky*, published as House Document No. 328, Seventy-first Congress, second session, has been of particular value to the T. V. A., and the fine cooperation of the War Department in the supplying of data and information has greatly expedited the work of the Authority. Both the War Department and the T. V. A. are studying conditions bearing upon the proposed canals in the Tombigbee-Warrior River system. Both agencies are also studying the potentialities of the T. V. A. development for national defense.

In the location of bridges across navigable streams, and indeed in all matters directly relating to navigation in the area, the T. V. A. has maintained close contact with the War Department. Construction of the new Wheeler Lock of 50-foot lift has been under the

direction of the Army engineers, and they planned the lock under construction at the Pickwick Dam.

Designs for the first two dams constructed by the T. V. A., the Norris and Joe Wheeler Dams, were prepared in the Denver designing office of the Bureau of Reclamation, under the direction of the chief designing engineer; in this way the T. V. A. received the benefits of the knowledge and experience of the older agency. The T. V. A. has also had some consultation with the Bureau of Reclamation with reference to the design of power plants and the Pickwick Dam.

In the development of foundation maps of the Tennessee Valley area, the T. V. A. has secured the close collaboration of several Federal agencies. Control surveys have been carried on with the cooperation of the T. E. R. A., and much of the preliminary work has been done by the Coast and Geodetic Survey, which ran control surveys through the lower basin at the request of T. V. A. In pushing forward its program of topographic and aerial mapping, the T. V. A. called upon the United States Geological Survey and made an initial allotment of \$250,000 for the conduct of the enterprise. A number of T. V. A. employees have been working under the direction of the Geological Survey in order to expedite the mapping work. Although not yet complete, the maps prepared by the Geological Survey have already been utilized in various phases of the work of the Authority. Relations between the T. V. A. and the topographic engineers of the Geological Survey have been particularly satisfactory, and the close cooperation is responsible for the rapid progress in the mapping of the basin.

The T. V. A. also maintains contact with the Water Resources branch of the United States Geological Survey for the collection of data regarding stream flowage in the Tennessee Valley. Approximately 70 percent of the cost of these investigations is paid by the T. V. A. The Authority has utilized the existing Weather Bureau stations for the measuring of rainfall and river stages, and has installed additional stations from which benefits are mutually derived.

The most serious flood-control problem in the valley is that of the Chattanooga area. The T. V. A. is keeping in close contact with the Chattanooga Flood Control Commission in order that the local plan may be coordinated with the broad plan being developed by the Authority for the entire region.

(b) *Electricity program.*—The T. V. A. electricity program has brought the Authority into frequent contact with the States, counties, and municipalities of the area. As has been said, legislation facilitating the distribution of T. V. A. power to local units has been

passed through the legislatures of Tennessee and Alabama. (See map fig. 13.)

At the present time, T. V. A. power is being sold to seven municipalities—Amory, New Albany, and Tupelo, in Mississippi; Athens and Muscle Shoals in Alabama; and Pulaski and Dayton in Tennessee. The Alcorn County Electric Power Association and the Pontotoc County Electric Power Association also purchase power from the Authority.

Many contacts with units desiring power are maintained, over 300 applications from municipalities having been received. The T. V. A. has assisted with legal problems in a number of instances, as for example in conference with Memphis city officials regarding a bill authorizing Memphis to operate its own electrical plant, in the formulation of Knoxville's case against the Tennessee Public Service Co., in the amending of the city charter of Pulaski, and in the preparation of ordinances for the city of New Albany.

The city commission of Florence, Ala., passed an ordinance allowing T. V. A. to locate transmission lines along the center line of certain streets, thus saving the Authority about \$15,000, and the city of Pulaski signed a contract to cooperate with the Electric Home and Farm Authority in merchandising electrical equipment. T. V. A. officials have held conferences with mayors and other officials of numerous municipalities as to the amount of the city's investment in the electric system.

The West Tennessee T. V. A. Contact Committee has been organized by local officials in order to facilitate cheaper power for all towns and cities in western Tennessee. The Tennessee Municipal League has planned a meeting of Tennessee mayors in Norris to discuss ways of cooperating with the T. V. A.

In making studies of rural electrification, the T. V. A. has cooperated with the Tennessee Emergency Relief Administration, and has agreed to give support to similar surveys being planned in Alabama. T. V. A. has also given assistance to the program of the National Power Policy Committee in the collection of data on existing and proposed Federal projects which involve the development of hydroelectric power.

The possibilities of support for the T. V. A. electrification program by the Federal Housing Authority have not yet been realized.

(c) *Fertilizer program.*—Experiments with a view to devising new and better fertilizers at the Muscle Shoals plant are being carried on by the T. V. A., in cooperation with the agricultural experiment stations in each of the valley States. Studies for this purpose at the experiment stations are being subsidized by the T. V. A. in accordance with agreements with each of

the land-grant colleges affected. Full time T. V. A. employees are carrying on the work in the chemical engineering laboratory at the University of Tennessee.

For several months in 1934 a representative of the Bureau of Mines was loaned to the T. V. A. for the direction of some important experimental work at Muscle Shoals. A small blast furnace located at the fixed nitrogen research laboratory of the Bureau of Chemistry and Soils at Washington, and used for the experimental production of phosphorus, was made available to the T. V. A. under an agreement with the Department of Agriculture, signed on October 10, 1933.

Fertilizer distributions and demonstrations are carried on in connection with the agricultural program and will be discussed under that heading.

(d) *Agricultural program.*—In the conduct of its agricultural program, the T. V. A. has been diligent and in a large measure successful in securing the cooperation of other agencies dealing with related problems. It has been the policy of the Authority to utilize, encourage, and assist those agencies already working in the field of agricultural readjustment, rather than to set up an expensive and duplicatory organization of its own. Close cooperation has been maintained, particularly with the Department of Agriculture and the land-grant colleges of the seven valley States, and through the latter, with the State agricultural experiment stations in research, and the State extension services in demonstration. On November 20, 1934, a written agreement between the Department of Agriculture, the T. V. A., and the agricultural colleges of the States of Virginia, North Carolina, Georgia, Kentucky, Tennessee, Alabama, and Mississippi was signed. This agreement, relative to a "systematic procedure for a coordinated program of agricultural research, extension, and land-use planning within the region of the Tennessee Valley Authority", has the declared purpose "to coordinate those phases of research, extension, land-use planning, and educational activities of these agencies which are related to a unified regional agricultural program."

According to the agreement, the colleges concerned are to designate a State contact officer to be selected jointly by the director of the experiment station and the director of extension. The duty of the contact officer is to familiarize himself with the agricultural work of the T. V. A. and that of the Department of Agriculture, especially the planning division of the A. A. A., and to make this information available to the experiment stations and extension staffs in his State. A correlating committee of three, representing the Department of Agriculture, the T. V. A., and the State colleges, respectively, was set up in order to facilitate

the desired coordination. In this way have been eliminated many of the dangers of duplication in the agricultural work being undertaken in the Tennessee Valley.

In pursuance of the collective agreements, contracts have been negotiated between the T. V. A. and each of the colleges involved, for the purpose of defining more clearly the details of cooperation. The agricultural experiment stations are furnishing information as to the types of soil and fertilizer needs in their areas, are conducting scientific tests of T. V. A. fertilizers, and are aiding in the research for new forms of plant food. The equipment and trained personnel of the experiment stations are being utilized, with the T. V. A. supplying money for additional personnel and expenses incurred.

The T. V. A. has made arrangements with the Alabama, Georgia, Kentucky, Mississippi, and Tennessee agricultural experiment stations to make experimental plantings of fiber flax, with seed furnished by the Authority. Other contacts are maintained, particularly with the University of Tennessee Agricultural Experiment Station. This agency has assisted the T. V. A. in a dairy survey of Sevier County, in experimental work with sorghum sirup and dehydrated sweet potatoes, and in other studies.

T. V. A. cooperation with the extension services in the program of agricultural readjustment has taken the form of demonstrating better farm practices, rotation of crops, soil erosion control, proper use of fertilizer, etc. To aid in this work the T. V. A. has adopted the policy of subsidizing "assistant county agents", responsible to the extension services, for the sole purpose of expediting agricultural readjustment. At the present time over 65 of these agents are on duty, with 91 contemplated by July 1. County soil conservation associations, area erosion control associations, and terracing units numbering over 100 have been formed under the joint sponsorship of the T. V. A. and the extension agents. Over 300 demonstration farms have already been approved. The T. V. A. has also sent a soil erosion expert to Hamilton County, Tenn., to work in the Chattanooga vicinity in close cooperation with the Hamilton County Agricultural Department.

The T. V. A. has had the cooperation of the extension services in other directions. The agricultural training extended to reservoir clearance employees in the Wheeler and Pickwick Reservoirs is being carried on with the assistance of the Alabama, Mississippi, and Tennessee extension services and county agents; the problem of the relocation and readjustment of farm families is being jointly attacked; and numerous conferences are held for the discussion of all agricultural problems.

In carrying on its agricultural and industrial programs, the T. V. A. has greatly needed minute and complete data regarding types, present use, and proper utilization of the soil throughout the valley. The Bureau of Chemistry and Soils of the Department of Agriculture has speeded up its investigations along these lines, and at the present time much is being accomplished through the cooperation of the T. V. A., the Bureau, and the various agricultural experiment stations in the area. The county soil-survey reports of the Bureau of Chemistry and Soils are made available to the T. V. A. Agricultural and industrial county surveys have been carried on by the T. V. A. with C. W. A. funds.

At the request of the T. V. A., the Bureau of Dairy Industry of the Department of Agriculture sent a dairy expert to Knoxville to consult with the University of Tennessee in working up a recommendation on plans for a Sevierville creamery and cold-storage house.

(e) *Forestry program.*—In the development of a forest policy for the Tennessee Valley area, the T. V. A. is working in close cooperation with the United States Forest Service as well as with State forestry departments. At the request of the T. V. A., the Forest Service has carried on an exhaustive timber survey of the Clinch River Watershed. In the conduct of this study, data and assistance have been furnished by the T. V. A., and the two agencies are together preparing a chart showing the requirements of the Tennessee Valley for forest products of various kinds. The T. V. A. is supplementing, rather than duplicating, the survey work of the Forest Service. The results of the land use studies being conducted by the T. V. A. are used by the Forest Service as a basis for the acquisition of submarginal lands for national-forest purposes.

Cooperation between the T. V. A., the Forest Service, and the Civilian Conservation Corps has been very close in the program of erosion control and reforestation which is being implemented through the C. C. C. camps. The T. V. A. is primarily responsible for drawing up the plans, the Forest Service for providing equipment and supervisory personnel. Over 20 C. C. C. camps have been engaged in this work, and over 171,000 acres of land have been benefited by the building of check dams, the spreading of brush matting, the digging of diversion ditches, and the planting of trees. The director of the emergency conservation work has left the making of plans for the forestry and soil erosion work to the T. V. A., and has given whole-hearted cooperation in their implementation. With the expansion of emergency conservation work, in pursuance of the recent Executive order, even more beneficial

results may be expected in the future from the three-fold cooperation.

A preliminary soil-erosion survey of the Norris Dam watershed was made by the United States Bureau of Chemistry and Soils, with the assistance and cooperation of the forestry division of the Authority, soon after the establishment of the T. V. A.

Land-classification data gathered by the T. V. A. have been made available to the land-policy section of the A. A. A., the United States Forest Service, the National Park Service, and the State forestry departments, for use in the location of desirable areas for national and State forests, parks, and recreational centers. For the effective coordination of forestry and conservation work in the Tennessee Valley, the Tennessee Valley technical forest council has been organized, composed of a representative from each of the seven State forest departments, the United States Forest Service, the National Park Service, the Forestry Department of the United States Bureau of Indian Affairs, with the chief forester of the Tennessee Valley Authority as chairman. Agreements for cooperative efforts in regard to wildlife in the area are in the process of negotiation between the forestry division of the T. V. A. and United States Bureau of Fisheries and Biological Survey. The T. V. A. is also cooperating in this work with State game authorities.

(f) *Industrial program.*—Numerous cooperative contacts have occurred in the industrial program of the Tennessee Valley Authority. The United States Bureau of Foreign and Domestic Commerce, at the request of the T. V. A. drew up and submitted a statement on the industrial development of the Tennessee Valley. This analysis included lists of products worthy of consideration in connection with the economic development of the region. Information and advice regarding the processing of meats, preservation of other foodstuffs, and the seed potato cooperative development in North Carolina have been received by the T. V. A. from the Bureau of Animal Industry and the Bureau of Plant Industry of the Department of Agriculture.

County industrial surveys have been carried on with C. W. A. funds and in cooperation with State extension services. State universities and land-grant colleges have assisted with the industrial program of the T. V. A., in various instances. A foods laboratory has been set up at the University of Tennessee, for experiments in power refrigeration, with dehydrated sweet potatoes, walnut products, etc. The University of Tennessee Agricultural Experiment Station is cooperating in the development of commercial food products from locally grown produce. Experiments in soil heat-

ing are in operation at the University of Tennessee farm while a cottonseed oil research program is planned in cooperation with the University of Tennessee Engineering Experiment Station.

A project has been set up providing for the cooperation of the T. V. A., the United States Department of Agriculture, and the Tennessee Extension Service in developing a plan for the promotion of dairying projects in the Tennessee Valley. Certain processes already developed by the United States Bureau of Dairy Industries will be the basis for these projects.

The industry division of the T. V. A. has worked with county agents in the cooperative marketing of hand-made products, and in local studies of various kinds. Investigations of proposed cooperative manufacturing enterprises have been made with the assistance of the State extension services, and the T. V. A. has prepared reports and recommendations concerning eligibility for financing to the Farm Credit Administration's bank of cooperatives. Development work in the construction of satisfactory low-cost cooking equipment is being carried on in cooperation with the agricultural engineering department at Blacksburg, Va.

The T. V. A. is planning to assist with resources and data in the national demonstration of decentralized industry proposed by the National Resources Board, and is also proposing to cooperate with the subcommittee on industrial decentralization of the national research council.

g. *Land planning program.*—Coordination in land planning is recognized by the Tennessee Valley Authority as absolutely essential. The program proposed for 1935 by the land planning division includes the following:

The assembly of all current proposals for construction or land occupancy change. Specifically, there will be assembled State agency plans, as for highways, airports, institutions; Federal agency plans, as for national forest extension, resettlement colonies, submarginal land purchase; T. V. A. plans, as for dam construction, transmission lines, industrial decentralization; local, county and municipal plans, as for water supply, sewage disposal, institutions, and any other information similar to the above * * *. This work is designed to insure that differing proposals for physical improvements, both from within and outside the T. V. A., will not be nullified by lack of coordination among the program affecting this area.

At the present time, in dealing with problems pertaining to land planning and utilization, the T. V. A. is working cooperatively with the Department of Agriculture, the Department of the Interior, the National Resources Board, the various State planning boards, the extension services and experiment stations of the land grant colleges, and several departments of the State governments. A Washington representative has

been appointed to review existing material on land-use planning and land policies, and to keep in contact with other Federal agencies dealing with similar problems.

A cooperative recreation and conservation survey has been carried on in order to guide such Federal agencies as the A. A. A., the United States Forest Service, and the National Park Service, in the purchase of submarginal land for regional recreation purposes. The National Park Service is cooperating with the T. V. A. in the supervision and direction of six park C. C. C. camps in the Norris area. Grading, terracing, and seeding work is carried on under superintendents furnished by the Park Service, and the expense of purchasing plant materials, grass seed, fertilizer, and small tools is also defrayed by the Department of the Interior.

For the construction of the Big Ridge Recreational Dam and the development work in connection with Big Ridge Park, the National Park Service is furnishing supervisory personnel and labor, and is bearing a part of the expense of building materials, with the T. V. A. also contributing. The National Park Service is also cooperating in connection with the construction of Monte Sano Park, for which, upon the proposal of the T. V. A., the city of Huntsville, Ala., agreed to purchase 2,000 acres of land.

The T. V. A. has sponsored joint conferences of the State planning boards of Tennessee, Alabama, North Carolina, Virginia, and Kentucky for the exchange of information and proposals. The Tennessee State Planning Commission has cooperated with the T. V. A. in land use studies, in public works program studies, and in the preparation of enabling legislation. The T. V. A. has assisted the Tennessee State Planning Commission in the determination of intrastate regions for planning purposes, and is acting jointly with the Tennessee and Kentucky boards in making published reports available. Maps of land-use problem areas, as prepared by the State land planning consultants of the National Resources Board and the land policy section of the A. A. A. are being converted to a uniform scale by the T. V. A. for its own use. The reports of the land planning consultants are also being utilized.

The Authority confers with State highway officials concerning the building of permanent roads and with regard to the relocation of State roads in the reservoir basins. In dealing with the latter problem, a written contract has been concluded between the T. V. A. and the Tennessee Highway Department. The T. V. A. freeway to Norris is to connect with the new highway being constructed from Knoxville to Hall's Crossroads by the State highway department and Knox County.

The T. V. A. has utilized cooperative contacts with several Federal and State agencies in connection with its housing program. Advice and information regard-

ing house designs have been exchanged with such agencies as the Bureau of Home Economics, the division of subsistence homesteads, the division of rural rehabilitation of the F. E. R. A., the housing division of the P. W. A., the Tennessee Home Economics Department, and the rural rehabilitation committee of the Tennessee and Alabama Emergency Relief Administrations. The T. V. A. and the division of subsistence homesteads have cooperated in field inspections at Crossville and Norris. In giving architectural assistance to the displaced population in the Norris Reservoir area, the T. V. A. has had the cooperation of the University of Tennessee Extension Service.

(h) *Social and economic program.*—In the conduct of its health and sanitation services, the Tennessee Valley Authority has been working in close cooperation with the United States Public Health Service, and also with the departments of public health in the valley States. Not only have advice and information been liberally received, but the United States Public Health Service assigned 2 medical officers and 1 sanitary engineer to aid the T. V. A. in its work of malaria control and rural sanitation. Recently, a medical advisory board, with representatives of the United States Public Health Service, the Department of Agriculture, and the Rockefeller Foundation has been set up to aid the T. V. A. in its attack on malaria. The T. V. A. sanitation program has been worked out in cooperation with the counties, the States, and the United States Public Health Service, which works through the local units. The serious problem which will arise with the flooding of the reservoirs has been planned for in advance by strengthening the public health service in over a dozen counties affected. The T. V. A. has contributed funds and direction, and the United States Public Health Service and State health departments have given support both directly and indirectly to the development of these county health units. These cooperative health projects have been set up in Tennessee, North Carolina, and Alabama. The United States Public Health Service has further assisted in a study of industrial hygiene in the fertilizer plants and has assigned a ventilating expert to work with the T. V. A. at Knoxville and elsewhere. In the T. V. A. medical service program, all service-injury compensation claims are handled through the United States Employees Compensation Commissions, and United States Marine Hospitals are used in connection with compensation cases. Courses in first-aid instruction have been given by the T. V. A. with the advice and direction of supervisors loaned by the Bureau of Mines.

Instances of contact with State health officers are too numerous to list completely, but the following examples are illustrative: the T. V. A. has cooperated with the Tennessee Department of Health in the formulation of

bills to be introduced into the legislature, in the preparation of a sanitary code for the town of Norris, in a study of sanitation problems at Pickwick, and in a survey of the public water supply at Tazewell. The Knoxville City Laboratory, in cooperation with the Authority, makes the tests needed in connection with medical services to employees. In no other field has the T. V. A. established more harmonious relations and beneficial cooperative contacts than in that of health and sanitation, where through associations with the United States Public Health Service, State and local health officers, and medical colleges and associations duplication of effort is avoided.

The social and economic research program has been carried on with the assistance of State and land-grant colleges, universities of the area, various State departments, Federal agencies, and research foundations. The Institute for Research in Social Science of the University of North Carolina, with the assistance of the T. V. A., is directing a comprehensive study of the Catawba River Valley, while the North Carolina State College Experiment Station is conducting a reconnaissance survey with special reference given to the human and social factors in soil erosion. Extensive archeological investigations in the reservoir areas have been made with the assistance and cooperation of the Smithsonian Institute and the Universities of Kentucky, Tennessee, and Alabama. The extension services of the University of Tennessee and Alabama Polytechnic Institute have assisted the Authority in relocation studies of the reservoir areas, and the results have been made available to the rehabilitation divisions of the State emergency-relief administrations. The T. V. A. and the University of Tennessee are studying the effect of the Authority's land purchases upon the financial structure of county units in the Norris area. In studying the problems involving county indebtedness, conferences have been held with county officials in order that any questions which they have in mind might not be overlooked.

An examination of the research program of the Social and Economic Division of the T. V. A. shows that this activity, like the others, is in line with the Authority's policy of working with and through existing agencies wherever possible rather than setting up duplicating facilities itself. Considering the numerous interests and activities of the T. V. A., considering the fact that no past experience of a regional authority was available to guide it, and considering the fact that the Authority has been in existence less than 2 years, the T. V. A.'s record of close cooperation is highly commendable.

(i) *Conclusions.*—Any Federally created regional authority which is superimposed upon the existing political structure will inevitably face the difficult prob-

lem of intergovernmental cooperation. The danger of duplicating effort, of formulating plans and programs in disregard of those of other agencies dealing with similar matters, is a real one, particularly in the case of a young and ambitious organization just entering the field. On the other hand, the knowledge and experience that come from long years of study in a particular realm and that are prerequisite to a successful developmental program oftentimes can only be found in existing Federal, State, and local departments and agencies. The importance of this fact has been appreciated by the T. V. A., which has been diligent in securing and utilizing valuable data and advice received from other governmental organizations. By far the majority of contacts with other Federal agencies have been of this character, and examples are almost innumerable.

In the case of other agencies which are actually in the field dealing with problems coming within the jurisdiction of the regional authority, the solution is not so simple. Exchange of information and advice does not suffice, and means of achieving the fullest cooperation must be found. Several methods have been employed in the case of the T. V. A., according to the particular circumstances involved, and generalization is difficult. Probably one of the most effective has been a written agreement, or contract, setting forth in more or less detail the basis for cooperation. Illustrative of such an arrangement are the contracts with the United States Geological Survey regarding the mapping program, with the Department of Agriculture and with each of the land-grant colleges relative to agricultural readjustment, and with the Tennessee State Highway Department concerning highway relocation in the reservoir area.

Written contracts, although particularly successful whenever a definite piece of work is to be done, are not always feasible, and other means of cooperation can be utilized. Frequently the desired ends can be accomplished through a "gentlemen's agreement", such as that between the T. V. A. and the United States Forest Service relative to the areas in which each will concentrate its work. This less formal type of agreement has been a common one in the experience of the T. V. A.

When numerous agencies are dealing with the same problems, coordination can sometimes be furthered by means of a joint committee, which is an improvement on the periodic conference. With reference to the Tennessee Valley area, the technical forest council, the malaria advisory board, and the agricultural joint committee are illustrations.

Perhaps the most perplexing problem in the field of coordination is the extent to which a regional development authority should work through existing

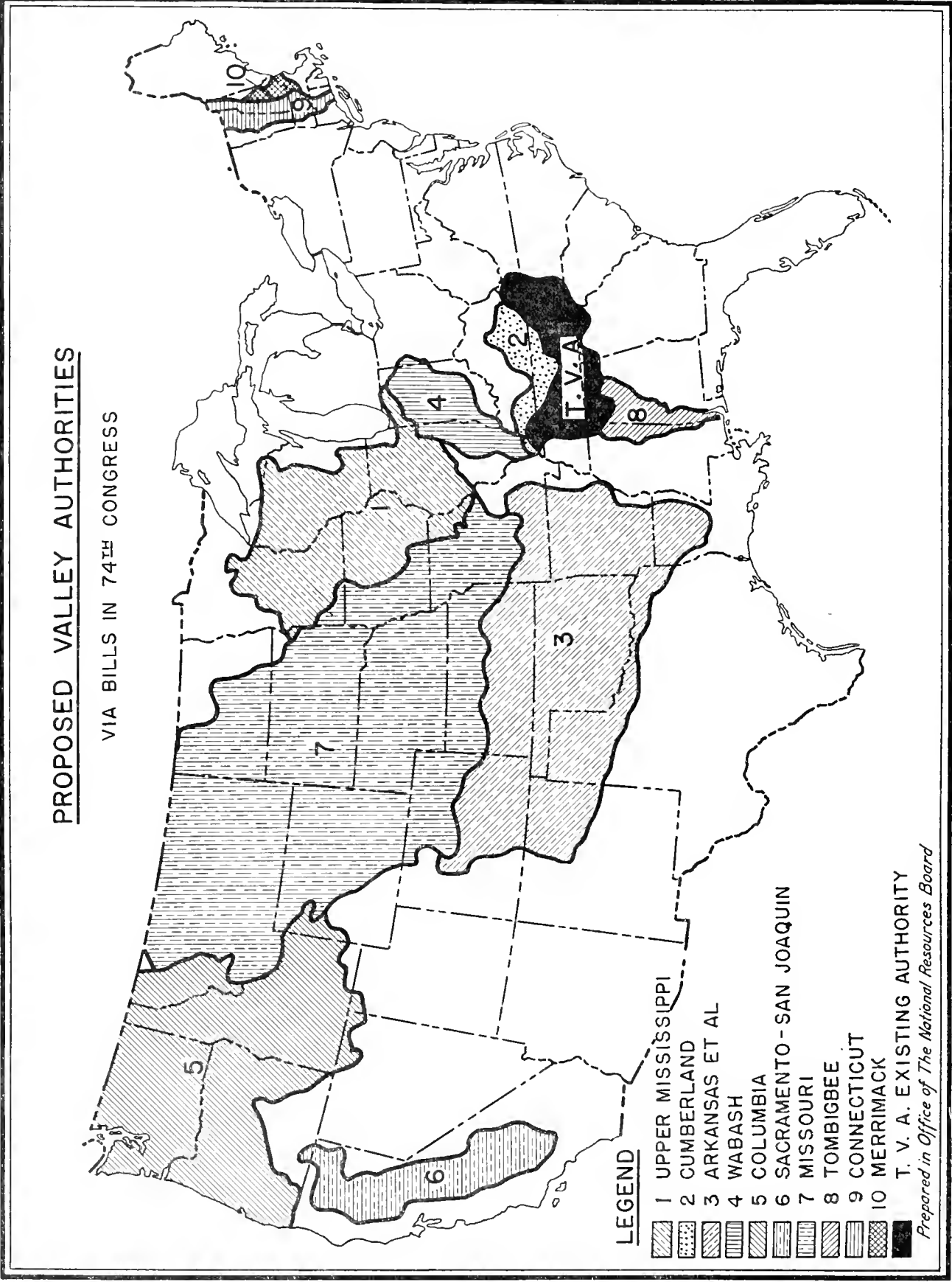


FIGURE 12.

agencies and their personnel or vice versa. The theory is much more simple than the practice. The declared policy of the T. V. A. is to work with and through existing agencies "wherever possible", in order to prevent duplication. Probably the best example appears in the T. V. A. agricultural program, under which the Authority has carefully avoided building up a large organization of its own, and has utilized the experienced personnel of the agricultural experiment stations and extension services. On the other hand, it is almost inevitable that in developing its own program a young regional authority should feel the superiority of its own personnel in certain particular fields and consequently be reluctant to rely upon existing organizations. Where this feeling of superiority is justifiable, a modification of the theory will frequently bring the best results. Since the determination as to which agency is best fitted to conduct a particular program is often difficult, generalization becomes unsatisfactory, and a solution must be found to fit the particular situation. In other fields, there seems to be no question as to the agency which is best qualified to do a particular piece of work and in such cases financial assistance on the part of those sharing in the benefits is clearly the best procedure. T. V. A. subsidies to the various experiment stations and to the United States Geological Survey for mapping work illustrate this point.

Although most of the developmental problems coming within the scope of authority of the T. V. A. transcend State boundaries, some of them (like those of forestry) are also carried on by State and local agencies—although usually without finances for adequate treatment. It is unquestionable that a large measure of the support given the T. V. A. by such agencies is due to the money which the Authority is able to spend in the area on programs which the local units have hoped eventually to carry on. A single illustration is the forestry program of the T. V. A., which represents the actual fulfillment of the aspirations of the forestry departments in the several States. In such fields there is more than sufficient work to be done without causing duplication, and continued cooperation seems assured.

One of the most impressive observations one makes when interviewing local government officials and citizens in the T. V. A. area is that support and cooperation are so widespread. This result is to be attributed in no small part to the foresight and understanding of the Authority's officials. In large part, however, cooperation of State and local governments results from the fact that they have long wanted to do many of the things the T. V. A. is able to undertake. Said the governor of 1 of the 7 States: "Of course we cooperate with the T. V. A. to the fullest extent. We ask them what legislation they consider necessary. After all,

we have wanted to build dams, attack the erosion problem, and all these other things. But we have not had the money. The more our basic resources were lost, the poorer agriculture became, the less able were we to cope with these problems through State agencies. When the T. V. A.'s program has been carried out we will be able to take care of such expenditures ourselves without Federal assistance; we will then have sufficient taxable valuation."

The relations of the T. V. A. to other governmental agencies have not been entirely without friction. The T. V. A. and the United States Soil Erosion Service were unable to agree upon a joint erosion-demonstration program, and it has been the feeling of some other agencies that the T. V. A. is inclined to ask assistance in its own work while not showing much regard for other programs. However, such instances are exceptional; on the whole cooperation has been close, and the experience of the T. V. A. should be of value to future regional authorities, if and when they are created and whatever their nature may be.

4. Proposed Regional Development Authorities

The influence of the T. V. A. Act may be clearly seen in over a dozen bills that have been introduced into the Seventy-fourth Congress for the purpose of fostering regional developments in other parts of the country. Ten drainage basins are affected and the total area involved is equal to approximately half that of the entire United States. Bills have been introduced into both Houses which would empower the T. V. A. to "exercise the same jurisdiction and power over the Cumberland River and the Cumberland River Basin" as over the Tennessee River and the Tennessee River Basin, while another proposal would add the Tombigbee River and Bear Creek Basins to the territory under the jurisdiction of the T. V. A. (See map, fig. 12.)

Government corporations, variously constituted and empowered, but in general much similar to the T. V. A., are proposed for the Columbia River drainage basin,⁷¹ the upper Mississippi River Valley,⁷² the Arkansas, White, and Red River Valleys,⁷³ the Connecticut River drainage basin,⁷⁴ the Merrimack River drainage basin,⁷⁵ and the Wabash and White River Valleys.⁷⁶ Two other proposals, authorizing the Bureau of Reclamation to make studies and to exercise many developmental powers, relate to the Missouri River Valley,⁷⁷ and to the Arkansas, Red, Ouachita, and White River

⁷¹ S. 869 and H. R. 6126 are identical.

⁷² S. 98, H. R. 4683, H. R. 4684, and H. R. 4685 are identical.

⁷³ H. R. 3622.

⁷⁴ H. R. 4979.

⁷⁵ H. R. 6233.

⁷⁶ H. R. 4235.

⁷⁷ H. R. 4241.

Valleys.⁷⁸ Bills authorizing congressional appropriations for assisting the Water Project Authority, created in 1933 by California statute, in its development of the Sacramento and San Joaquin River Valleys, have also been introduced.⁷⁹

a. *Delimitation of area.*—As shown on the accompanying map, the regions which are proposed differ markedly in size, ranging from the Merrimack River Basin, which affects only the States of New Hampshire and Massachusetts, to the huge, diversified Missouri River Valley, which comprises parts of 10 States. The Columbia, upper Mississippi, and Arkansas Valley areas are all much larger than the drainage basin over which the T. V. A. has jurisdiction.

In the delimitation of area, the wording of the proposed bills shows considerable variation. In only one instance, namely, in the Arkansas Valley Authority Act, do the words "or such adjoining territory as may be related to, or materially affected by, the development consequent to this act" appear, as in the T. V. A. Act, in the sections authorizing studies and plans for regional development. However, in every case, "transmission distance" rather than the watershed boundary, is recognized as the limiting factor in the sale of power and the construction of transmission lines.

The Arkansas Valley Authority Act contains the provision that "the watersheds of the Arkansas River, the White River, and the Red River for the purposes of this act shall be deemed to include the States of Oklahoma, Texas, Arkansas, New Mexico, Colorado, Missouri, and Kansas." The other Arkansas proposal would authorize the Bureau of Reclamation to "make a study and survey of the entire Arkansas, Red, Ouachita, and White River Basins in the States of Arkansas, Louisiana, Missouri, Texas, Oklahoma, Kansas, New Mexico, and Colorado."

The Columbia, upper Mississippi, Connecticut, Merrimack, Wabash, and Missouri bills all define the area involved in terms of a drainage basin, as for example "the entire upper Mississippi River Basin", the "entire Missouri River Basin", or the "basins of the Wabash and White Rivers." Planning and developmental functions, e. g., promoting "the economic and social well-being of the people", are in each case related to "the said territory", or "the said basin", without any elastic provision such as occurs in the

T. V. A. Act. However, the Connecticut, Merrimack, and Wabash bills provide for the delivery of water for manufacture of electrical energy and for municipal and domestic uses to the States in the particular valley and to "political subdivisions and municipal corporations in any of those States."

(b) *Purposes.*—The problems arising in the various drainage basins differ in many respects,⁸⁰ and this differentiation is reflected in the declared purposes of the various proposed bills. These provisions may be compared to the first section of the T. V. A. Act, wherein are listed the three purposes of "maintaining and operating the properties now owned by the United States in the vicinity of Muscle Shoals, Ala., in the interest of the national defense and for agricultural and industrial development, and to improve navigation in the Tennessee River and to control the destructive flood waters in the Tennessee River and Mississippi River Basins."

All of the eight bills under consideration enumerate as express purposes the controlling of flood waters, improvements of navigation, and the development of hydroelectric energy. The Columbia, upper Mississippi, Missouri, and both Arkansas bills include the improvement of agricultural conditions. The Columbia and both Arkansas bills refer to irrigation of arid and semiarid land. The upper Mississippi and Missouri bills and the Arkansas bill empowering the Bureau of Reclamation all expressly mention the restoration and preservation of water levels as a purpose. The Connecticut, Merrimack, and Wabash bills all enumerate the storage and delivery of water for domestic and municipal uses, the acquisition of hill, overflow, or marginal lands to be used for cultivating timber, protecting wildlife, and conserving natural resources, and the setting aside of such lands as timber or game preserves or for public parks or recreational areas. The Connecticut and Merrimack bills include as a purpose the making and carrying out of plans for the elimination of pollution, while the Arkansas Valley Authority Act expressly mentions as purposes "the terracing of lands and the control of erosion, reforestation of lands suitable therefor", and "aiding and improving the economic and social well-being of the people living in such watersheds."

(c) *Administrative instrumentation.*—The instrumentations of the purposes as outlined above present several interesting variations. Government corporations, with characteristics very similar to those of the T. V. A., are proposed in the Columbia, upper Mississippi, Connecticut, Merrimack, and Wabash bills and in one of the Arkansas bills. In each case control would be vested in a board of directors, composed of 3 or 5

⁷⁸ H. R. 3609.

⁷⁹ These bills, H. R. 4122 and H. R. 4128, need merely be mentioned in passing for 1 or 2 interesting features they contain. \$50,000,000 would be granted outright and \$120,000,000 would be loaned to the Water Project Authority (Central Valley Authority), a public corporation created by California statute in 1933. The Secretary of the Interior and the Secretary of War would exercise joint power and authority in administering the act and in authorizing and approving all expenditures and all contracts entered into by the Authority for the sale, use, or disposal of water and electric energy.

⁸⁰ See National Resources Board Report, December 1934, pt. III, Report of the Water Planning Committee, p. 276 ff.

members appointed by the President. Terms of office vary from 6, 7, and 9 to 12 years, being staggered in each instance. The Connecticut bill, which provides for a board composed of 5 members, states that "1 member each of said board shall be residents of the State of New Hampshire, Vermont, Massachusetts, and Connecticut, but no 2 members shall be resident of any 1 State." The Merrimack bill, proposing a board of 3 members, contains a similar stipulation with reference to the States of New Hampshire and Massachusetts.

The two remaining bills authorize the Bureau of Reclamation to make studies and surveys and to exercise powers very similar to those of the Government corporations.

A unique provision of the Columbia Valley bill states that "there shall be an advisory board composed of the Pacific Northwest Regional Planning Commission, composed of the State planning boards of Idaho, Oregon, Washington, and Montana, and representatives of the Secretaries of Interior, War, Agriculture, Commerce, Labor, and of the Federal Emergency Relief Administrator."

In the case of each proposed Government corporation, with the exception of the Columbia Valley Authority, the personnel system would be set up substantially as is that of the T. V. A., i.e., through appointment of all employees by the board without regard to the provisions of the civil-service laws. The Columbia bill and the two bills empowering the Bureau of Reclamation, provide for appointment of employees by the board, or the Bureau, but omit the clause "without regard to the civil-service laws." In every case, as in the T. V. A. Act, selection and promotion of employees and officials must be made on the basis of merit and efficiency, with no political test or qualification being permitted or given consideration.

The Connecticut, Merrimack, and Wabash bills state that "in the administration of this act so far as it relates to the production, sale, transmission, and delivery of electric power, the corporation herein created shall be subject to regulation and control of the Federal Power Commission and the provisions of the Federal Water Power Act, the same as privately owned and controlled corporations, firms, and persons engaged in similar water-power projects, developments, and activities."

The Arkansas Valley Authority, Connecticut, Merrimack, and Wabash bills each contain a section in which the consent of Congress is expressly given to the States involved to negotiate and enter into agreements for a "comprehensive plan for the development" of the region. Such agreements may authorize the creation of interstate commissions and/or the creation of corporations, authorities, or other instrumentalities. The

consent of Congress is given "upon condition that a representative of the United States, to be appointed by the President, shall participate in the negotiations and shall make report to Congress of the proceedings and of any compact or agreement entered into." No such compact or agreement shall be binding upon any of the States until approved by the legislature of each State concerned and by Congress. The United States, its permittees, licensees, and contractees, and all users of water "stored, diverted, carried, and/or distributed by the reservoir, canals, and other works authorized in this act" must observe and be subject to and controlled by any such compacts or agreements.

(d) *Power development*.—Provisions substantially the same as those in the T. V. A. Act with regard to the sale of electric power, the acquisition of real estate and construction of dams, the construction and leasing of transmission lines, the condemnation of lands, easements, and rights-of-way, and assistance from other Federal agencies and officials appear in all eight of the bills under consideration. On the other hand, several express provisions not found in the T. V. A. Act occur. The Columbia, upper Mississippi, Missouri, and both Arkansas bills authorize the corporation (or Bureau) "to rent, purchase, or erect transmission lines for the transmission of electricity connecting any dams, reservoirs, or power houses, and for transmitting power developed by the corporation (or Bureau) to the place or places of consumption." Excepting the Arkansas Valley Authority Act, the same bills authorize the corporation (or Bureau) to "establish, maintain, and operate laboratories and experimental plants, and to undertake experiments for the distribution of electricity to farm organizations, municipal corporations, States and public subdivisions of States, counties, or municipalities."

The Upper Mississippi and Arkansas Valley Authority bills authorize the corporation to acquire materials and equipment necessary to the fullest possible utilization of power by rural consumers and to contract for the furnishing of such materials or equipment to the consumers at a reasonable cost, and the latter bill empowers the board "to form subsidiary corporations for the purpose of buying and selling water, electrical power, and electrical equipment or for such other purposes as may be necessary in order to carry out the full purpose and intent of this act."

The Connecticut, Merrimack, and Wabash bills authorize construction, maintenance, and operation of hydroelectric plants at suitable sites, "providing there is an adequate market for the electric power so generated." With the exception of the Missouri bill, all the proposed acts expressly provide for the supplying of water to States and political subdivisions and municipal corporations in the States, such water to be used

variously for the manufacture of electrical energy, municipal, and domestic uses, irrigation, and "for other purposes."

(e) *Planning and development.*—It is significant to note that of the eight proposed bills, only the Arkansas Valley Authority Act embodies, without important alteration, the planning provisions of the T. V. A. Act, sections 22 and 23. The other seven similarly provide for surveys and general plans, for cooperation with States and their subdivisions, and for the recommendation of legislation to Congress, such recommendation to be made by the corporation (or Bureau), however, as well as by the President. In section 23, the T. V. A. Act authorized the President to *recommend to Congress* legislation for the especial purpose of bringing about in the Tennessee Basin and adjoining territory: "(1) The maximum amount of flood control; (2) the maximum development of said Tennessee River for navigation purposes; (3) the maximum generation of electric power consistent with flood control and navigation; (4) the proper use of marginal lands; (5) the proper method of reforestation of all lands in said drainage basin suitable for reforestation; and (6) the economic and social well-being of the people living in said river basin." However, each of the 7 proposed bills enumerates these 6 points, with some minor changes and additions, as things which "it shall be the duty of the corporation (or Bureau) by the methods and means provided for in this Act, *to bring about.*" Moreover, the Arkansas Valley Authority Act, in another section, expressly authorizes and directs the board "to do such things as are provided for in this act to aid and improve the economic and social well-being of the people living in the watershed of the Arkansas, the White, and Red Rivers."

Particular problems are dealt with in most of the bills, as, for example, irrigation of arid land, to which reference has already been made. The Upper Mississippi bill and both bills empowering the Bureau of Reclamation to provide for the ascertainment from studies "whether the underground water level in said basin, or any part thereof, has been receding and what steps can be taken for the purpose of restoring and preserving said water level." Also, the Connecticut and Merrimack bills provide for the making and implementation of plans to eliminate pollution, and the Wabash bill authorizes surveys and general plans with regard to connecting the commerce of the Great Lakes with the Mississippi River through the headwaters of the Wabash.

Provision is made in the Columbia bill for the corporation to assume control of the Grand Coulee and Bonneville Dams upon their completion, while the Missouri

bill would turn over to the Bureau of Reclamation the finished dam now being constructed by the War Department at Fort Peck, Mont.

(f) *Financing.*—Financing of the proposed projects varies. The Columbia and Upper Mississippi bills, and both bills empowering the Bureau of Reclamation authorize, as does the T. V. A. Act, "all appropriations necessary to carry out the provisions of this act." The Connecticut and Merrimack bills each authorize appropriations not to exceed \$50,000,000, the Wabash bill authorizes appropriations not to exceed \$60,000,000, and the Arkansas Valley Authority bill contains an appropriation of \$75,000,000. The Columbia bill alone provides for the issue of bonds by the Board, the amount involved not to exceed \$50,000,000.

The Columbia and Upper Mississippi bills, and both bills empowering the Bureau of Reclamation, provide for the turning over to the Secretary of the Treasury of all surplus moneys from the sale of power to be "applied on the payment of the amount or amounts allocated to power until all of the amounts thus allocated to power shall have been repaid to the Government of the United States." Only the Connecticut and Merrimack bills stipulate payment to the States involved of a percent of the gross receipts from the sale of power, 10 percent being the amount in each case. The two latter bills, as well as the Wabash bill, provide that "the Authority herein created is authorized to pay postage." The auditing procedure in the case of each of the six Government corporations is identical to that outlined in the T. V. A. Act.

(g) *General consideration.*—It is quite unlikely that all of these bills will be enacted; perhaps none of them will. On the other hand, President Roosevelt has said, "If we are successful here (T. V. A.) we can march on, step by step, in a like development of other great natural territorial units within our borders."⁶¹ Other portions of the country are aware that the T. V. A. has brought greatly increased economic activity to the Tennessee Valley, and hence attempted imitation is not surprising. Regional planning appeals to the popular imagination; it seems to be a fundamental attack upon the planlessness which brought on the depression. Moreover, there are in the United States other large regions which suffer from unplanned use of water and land—from failure to develop potential resources to their fullest capacity. Therefore, in looking ahead it seems to be desirable that serious consideration should be given to the basic questions which should control the creation of regional development authorities and which should guide their organization, administration, and control. These matters will be discussed in the following paragraphs.

⁶¹ Message to Congress, Apr. 10, 1935.

The first point which should be noted is that problems differ considerably as between various water-development schemes. Thus, the Boulder Dam project is a diversion program designed to transfer water and power long distances to developed communities. Inasmuch as the improvement of the land immediately surrounding the dam is not the primary object of the plan, the creation of a planning and operating authority for social and economic development is not necessary; a small staff to run the power house will suffice. But the situation is much different in the case of the T. V. A., where a whole region immediately adjoining rivers and power sites seems to need social and economic planning through a unified agency. Proponents of development programs believe they find the same basic factors in the Columbia River, Upper Mississippi, and in other proposed authorities. No doubt the case is much stronger for some regional development schemes than for others.

Another fact which should be given adequate consideration is that a unified authority, modeled after the T. V. A., may be desirable for planning and construction programs if and when a multiplicity of existing agencies makes integration and effective progress difficult if not impossible. If planning and development are to be encouraged by the Government, the regional authority may be imperative in some cases if duplication, disagreement, and stalemating are not to result. For example, in the Pacific Northwest responsibility for regional planning and river improvement are shared by the Bureau of Reclamation, the Corps of Engineers, and the National Resources Board. What will happen to the water impounded and the hydroelectric power made available when the Bonneville and Grand Coulee projects are completed? If the development of a region is actively desired and undertaken, authority and responsibility should be equal. This principle of business administration, added to the principle of unity of management and control, would appear to indicate the desirability of the regional development authority whenever other basic factors are present in a given area.

5. The Use of the Federal Regional Authority

(a). *An evaluation of the Tennessee Valley Authority.*—One of the most important questions that arises from an examination of the T. V. A. is that of the desirability of the watershed as an areal unit for social and economic planning and development. Maps depicting the territory under the jurisdiction of the T. V. A. commonly exhibit a compact area which represents the territory drained by the Tennessee River and its tributaries. What were the reasons underlying the selection of the drainage basin as a region for planning and development? What are the advantages and disadvantages of such a choice? Is such a

region appropriate? These are some of the questions that are immediately called to mind.

The origin of the T. V. A. throws very little light on the question under consideration. President Roosevelt spoke of a "complete river watershed" as a "great natural territorial unit." He pointed out that the Tennessee Valley was chosen because it combined "all the climatic and geographical factors favorable to the scheme" and because "more existing data on its economic possibilities are available than in any other region." Congressional hearings and debates concerning the T. V. A. bill disclose no careful consideration as to the appropriateness of the watershed area for economic and social planning purposes. There was little difficulty, however, in choosing the watershed as the most suitable area for integrated planning of river development. The Wilson Dam and power house, already the property of the United States, would be materially affected by the building of other dams in the Tennessee River system. Obviously, the necessary construction projects should not be planned and carried out by separate agencies; a single authority, clothed with the power to develop a unified water-control program, was the result. Thus, the T. V. A. was created as a watershed authority in order to deal adequately with problems of water control; its broader planning functions have been conditioned by that fact.

The watershed area has both advantages and disadvantages as a region for planning and development purposes. In the case of all questions directly related to water control, no other area is more suitable. Flood control, navigation, and water-power development can be dealt with adequately only as integral parts of a unified plan for the watershed area. Erosion and afforestation are so closely related to the water program that the same area provides a suitable unit for their treatment. Other phases of developmental activity are influenced by the water program, although less directly so. For example, hydroelectric power is vital to agricultural and industrial planning, and indeed is a basic factor in the improvement of social and economic well-being. On the other hand, many problems cut across watershed boundaries and should be treated accordingly. With regard to the development of natural resources and the improvement of standards of living in the Nation, the National Resources Board Report of December 1934 stated "it is already plain that we must follow the problem wherever it leads, whether across State boundaries or into the intricacies of outworn local government or the equally difficult complexities of metropolitan life." This statement is applicable to a watershed area, as well as to State and local boundaries, as the following examples will serve to illustrate. Let us take first the question of power distribution. Although most advantageously developed as part of a

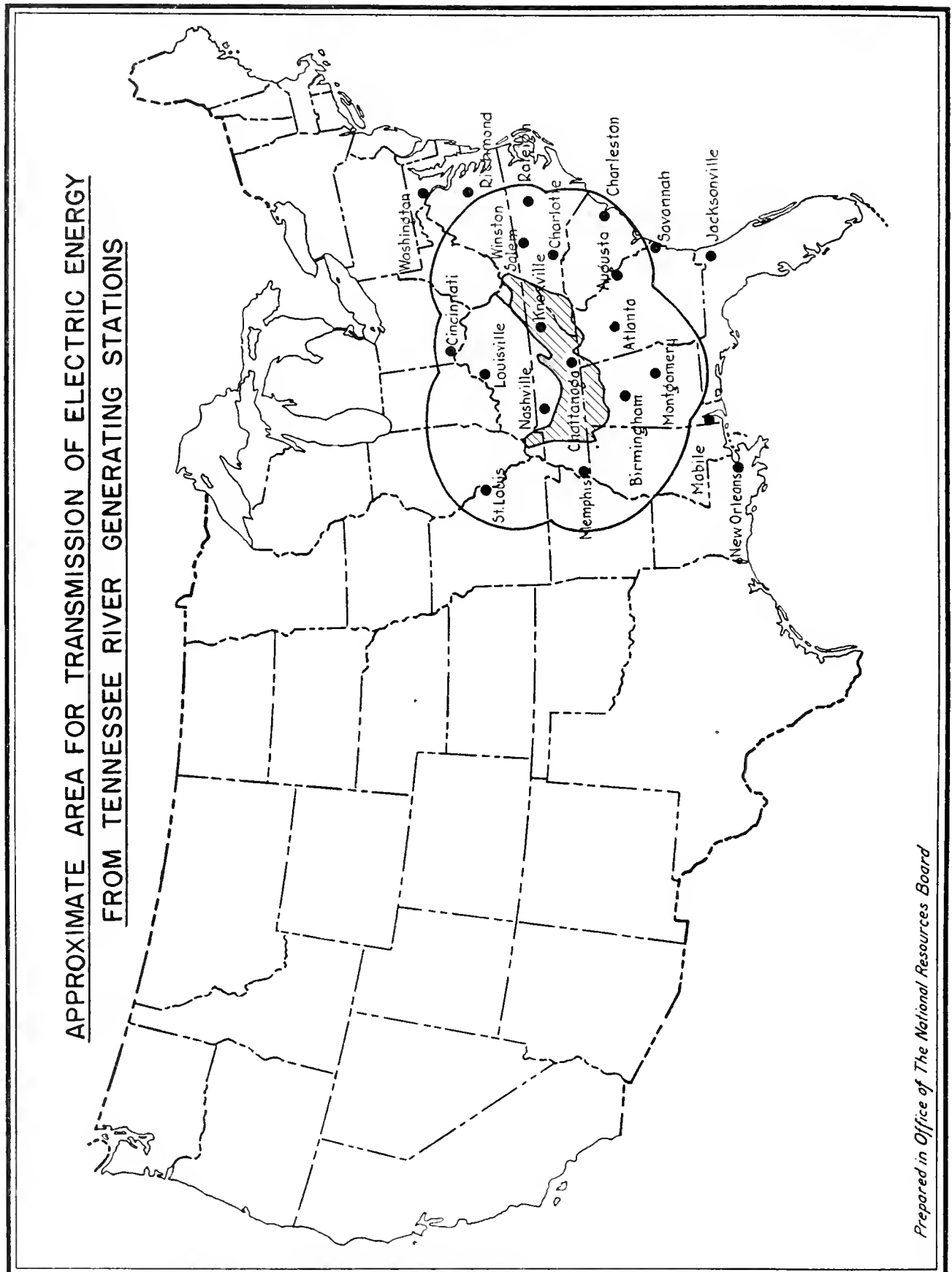


FIGURE 13.

united plan for a complete river system, hydroelectric power is most economically distributed on the basis of transmission distance from the point of generation, with utter disregard of the watershed boundary. The accompanying map (see fig. 13), indicating a possible region for the distribution of hydroelectric power, is based upon a transmission distance of 250 miles from existing and proposed generating stations in the Tennessee Valley.⁸² Problems of land utilization, agriculture, industry, and transportation all likewise cut across the boundary of the drainage basin. Thus, the southwest portion of the Tennessee Valley, while possessing characteristics very similar to those of the adjoining territory in Tennessee, Mississippi, and Alabama, has little in common, either topographically or economically, with the mountainous headwaters region in the Northeast. Dissimilarities in soil and in agricultural production emphasize the fact that the watershed area is far from being economically homogeneous. In this connection, a statement by the head of the Land Planning Division of the T. V. A. is pertinent. He has remarked that "the implication of the effects of construction projects extend throughout the several economic subregions which are wholly or partially within the watershed, and cannot be omitted from consideration in any detail."

What has just been said is sufficient to show that a watershed area is not the "perfect" region for all planning and developmental purposes. If this fact be recognized, then the question of relative desirability may be realistically approached. In neither theory nor practice has the sphere of authority of the T. V. A. been definitely set at the watershed boundary. The President's proposal to Congress, sections 22 and 23 of the T. V. A. Act, and the Executive order issued in pursuance of section 22 all employ the language "and adjoining territory"—the reference in section 22 being to "such adjoining territory as may be related to or materially affected by the development consequent to this act." This elastic clause has enabled the T. V. A. to pursue its studies in such fields as transportation economics, industrialization, rural electrification, and local governmental administration without rigid adherence to the boundary of the valley. In this way the disadvantages of the watershed area as a region for planning and development purposes are materially decreased, while the advantages are retained. A unified water-control program becomes the core of a regional development plan that embraces a wide variety of water and land uses, and has for its purpose the improved economic and social well-being of the people in the region. All phases of such a plan are materially affected by the water-control program, and

the watershed area thus forms an appropriate nucleus. If the boundary is not rigidified, if individual problems and studies may be treated without strict adherence to that boundary, then the watershed area becomes a desirable nucleus for social and economic planning and development.

It is the view of Dr. Arthur Morgan and of several other T. V. A. officials that so-called "homogeneity" may be carried to the extreme, and thus produce socially undesirable results, in regional planning. For example, in delineating a region for planning, economic, and governmental purposes it would be socially unjust and unwise to put all of the underprivileged people of the Ozarks or of the Piedmont Crescent in one self-contained unit. In other words, purely physical factors should be counterbalanced by social considerations. A weak area should not be isolated. The strong and the weak should be joined, thereby raising the lower level and hence elevating the national standard. Diversity is not a bad thing in regional planning, according to this view; in fact, it is sometimes to be encouraged in order to prevent the leaving of "black spots" alongside richer regions and in order to develop the proper degree of regional self-sufficiency.

The United States is so large that we may need to develop greater self-sufficiency in its major regions. A one-resource and one-crop area is not the ideal. The balance and self-sufficiency which result from diversified agriculture and sound local industry are to be desired. As this view is substituted for the extreme "homogeneous" conception, the United States may outgrow its "sectionalism" and replace it with a "cultural regionalism." Why pay freight rates on manufactured goods from New England or Pittsburgh if they can be produced at a lower net cost for regional consumption in the T. V. A. area or the Pacific Northwest? The Federal Government's electricity program is making this result possible.

The experience of the T. V. A. raises another significant question, that of the desirability of the corporate device for the administration of a regional development scheme. It appears to be definitely established that the corporate principle is a sound one for the conduct of a regional program such as that of the T. V. A. The satisfactory implementation of plans demands energetic and vigorous action, and the autonomy which is characteristic of the corporation is conducive to that end. In the case of the T. V. A., President Roosevelt's desire for "a corporation clothed with the powers of Government but possessed of the flexibility and initiative of a private enterprise" has been largely realized. The board of directors has been granted a great deal of freedom in the carrying on of the work, and this flexibility has been very advantageous. Not only is it necessary and advisable to maintain freedom

⁸² This is our analysis of the situation and does not represent a program adopted by the T. V. A.

in policy formation, within certain broad limits, but a large measure of independence in the conduct of financial affairs and purchasing operations is desirable. A public corporation, put upon its own mettle through a sound capitalization, and having the opportunity for expansion, has every encouragement to efficient and economical operation. While the T. V. A., unlike most Government corporations, has had to depend upon periodic and uncertain congressional appropriations, the power to borrow money up to a certain limit, the ability to make purchases without strict adherence to rigid governmental rules, the freedom to adopt modern accounting methods indicating the complete financial position of the corporation, and the power to use profits for building up a reserve and for financial improvements, are advantages which the corporation possesses as compared to the ordinary Government establishment. These advantages would be seriously diminished by the establishment of a continuous pre-audit by the Comptroller General's office. Freedom of regional development authorities from such a pre-audit should be guaranteed by legislation. Even in the matter of the post-audit the regional authority could be advantageously removed from the ordinary jurisdiction of the comptroller. An outside audit by a reputable firm of commercial auditors, pointing out inefficient as well as dishonest and illegal practices, has much to commend it. This by no means removes the corporation's responsibility to the Government. Where exceptional circumstances warranted a Government audit, such an investigation could be conducted independently.

The administrative organization of a Government corporation acting as a regional planning and development agency is important, and the T. V. A. has several lessons to offer. As was pointed out above, the 3 directors of the T. V. A. have divided their supervisory work into 3 parts, and each has the primary responsibility for the carrying out of the functions falling within his allocation. Although the agreement through which this allocation was effected states that "this does not mean that the individual directors will formulate policies for their separate divisions. The board as a whole will continue to adopt all policies", nevertheless such an administrative arrangement is of doubtful wisdom. It is almost inevitable that each director should come to look upon his sphere of control as his particular bailiwick, and consequently integration of policies and programs becomes increasingly difficult. If the board were to consist of 5 rather than 3 members, the temptation to divide the detailed duties would be lessened, and the way would be opened to more effective concentration upon planning and policy formation on the part of the board acting as

a unit. This is simply a recognition of the principles of sound corporate administration, under which the board of directors should be the policy-formulating unit, and although exercising complete surveillance and ultimate control over the management, should not interfere with administrative details. Under such an arrangement, the crying need is for a general manager of the corporation, who is given complete administrative control over every phase of the organization's activity. Such an officer is nowhere to be found in the T. V. A.,⁸³ since the directors have been reluctant to relinquish the administrative powers which they have assumed. However, the integration and coordination of activity which would result from the creation of the office, let us say, of president of the board and general manager, would be very beneficial. Regional-development authorities, like other going concerns, need unity of management. Above everything else at this juncture the T. V. A. demands synthesis of policy and planning activities and integration of administrative functioning. The common corporate practice of making the president of the board also the general manager may quite conceivably be the best policy for regional authorities to follow. If there were integration at the top there would soon be coordination all along the line—in planning, in research, and in industrial promotion.

Other lessons of value may be learned from the 2 years' experience of the T. V. A. The importance of developing the interest and close cooperation of resident individuals and groups in the planning and development area has been clearly demonstrated. Nearly every forward step demands enthusiastic support, and in many cases active participation, on the part of the people. The task of securing this cooperation has been one of the most immediate problems faced by the T. V. A., and much time and effort has been contributed to the disarming of suspicion, the demonstration of benefits, and the enlistment of support. Much of this difficulty could be avoided by the laying of a sound foundation in the support of local groups and individuals before the actual work of a regional authority is begun. The history of the T. V. A. indicates that the stimulus for its creation came largely from without the valley, but if the demand for such an agency could be developed in a wide-spread manner before its inception, the opportunity for immediate and rapid progress will have been appreciably increased.

⁸³ At the first meeting of the Board of the T. V. A. on June 16, 1933, A. E. Morgan, the chairman of the Board, was designated as general manager of the corporation. His functions were to be those "customary to the general manager of a private corporation." This action was superseded by the later allocation of administrative responsibility to the three Board members.

Any future regional authority which might be created will have the benefit of the clarification of legal and constitutional issues arising out of the Tennessee Valley project. Although the questions may not be in every case identical, the broader, more important issues will have been threshed out, and comparable delay in the prosecution of the development program will not be necessitated.

As outlined above, the T. V. A. has well demonstrated the possibilities of intergovernmental cooperation in the conduct of a regional development program. Integration and coordination of the plans and projects of the various Federal, State, and local agencies may be achieved provided the need for such collaboration is realized, and provided recognition of the maximum public service as the mutual goal is ever present. No single method of cooperation may be rigidly formulated, but if the desire is present, each contact may be governed as the circumstances permit. The T. V. A. has benefited greatly, in its relations to other governmental agencies, from the exchange of advice and information, from written contracts and verbal agreements, from the establishment of joint coordinating and advisory committees, from direct cooperative administrative set-ups, and from the granting and receipt of financial assistance.

The personnel system of the T. V. A. has undoubtedly much to offer as an example to other organizations. Although removed from the strict application of civil-service laws and regulations, the T. V. A. has been diligent in the selection of employees on the basis of merit and ability, and indeed has been frequently attacked for its refusal to consider political qualifications. One of the outstanding characteristics of the T. V. A. personnel is a feeling of enthusiasm in the pursuit of a common goal, the rendering of a public service. This enthusiasm arises partly from the characteristics of the corporation, since here, it is felt, is an organization that can eliminate a large measure of governmental red tape, and can actually do something. Planning, progress, development depend to a large degree upon this attitude, and its existence is a safeguard against the danger of settling down to an unprogressive and planless routine.

(b). *Regional authorities and national planning.*—A regional authority, charged with the planning and development of a particular section of the country, cannot be divorced from national planning and national development. Concentration of Federal expenditures and efforts in a particular region can be justified only if the ultimate results contribute to higher standards of living throughout the Nation. At the present stage, however, the most immediate problem, and one which is of national concern, is the develop-

ment of backward regions, in which planlessness, misuse, and exploitation have resulted in physical, economic, and social waste and deterioration. Progress in such areas means progress for the Nation; the prosperity of the whole depends upon the prosperity of its parts.

It is frequently argued that regional developments will cause dislocations in other sections—for example, through the attraction of industries, and through competition with existing producers and manufacturers. This fact cannot be denied, but it does not reveal the whole problem. If a backward region is left undeveloped, if the inhabitants eke out only a bare existence, the prosperity of the neighboring territory is endangered through the probability of migration with its attendant labor, congestion, and relief problems, and through the attractiveness which the cheap labor of the poverty-stricken area holds to light industries. On the other hand, the increased purchasing power of a prosperous region will spread its benefits to other sections of the country. There is much truth in the words used by the chairman of the board of the T. V. A. when, in addressing an Ohio community, he remarked, "Our country can no longer maintain isolated areas of prosperity. The southern highlands will reflect their prosperity upon you, or their poverty and exploitation will spread like an infection to your own communities." If all regional authorities will seek to avoid unnecessary industrial competition with other areas, and will concentrate upon the development of new, noncompetitive industries wherever possible, as has the T. V. A., the few dislocations in other sections will be more than outweighed by the resulting increase in our national living standards.

The ultimate test of a regional planning and development scheme is its ready adaptability to national planning, and the experience of the T. V. A. gives evidence that this adaptability can easily be achieved. T. V. A. programs in the fields of power distribution, land planning, forestry, agriculture, and industry are all capable of incorporation in a comprehensive national program. There is no conflict between a regional plan and a national plan; the first can be made merely a stepping stone to the second. If this integration and coordination is to be assured, however, all regional development authorities should have a direct responsibility to an arm of the National Government. Responsibility only to an overworked President can hardly achieve the desired results. A better solution would appear to be the coordination of regional developments under the appropriate Cabinet officer, probably the Secretary of the Interior. National planning and development must be paramount, and regional projects should be properly conceived and effectuated as means to this end.

Tennessee Valley Act

Sections providing for comprehensive planning

SEC. 22. To aid further the proper use, conservation, and development of the natural resources of the Tennessee River drainage basin and of such adjoining territory as may be related to or materially affected by the development consequent to this act, and to provide for the general welfare of the citizens of said areas, the President is hereby authorized, by such means or methods as he may deem proper within the limits of appropriations made therefor by Congress, to make such surveys of and general plans for said Tennessee basin and adjoining territory as may be useful to the Congress and to the several States in guiding and controlling the extent, sequence, and nature of development that may be equitably and economically advanced through the expenditure of public funds, or through the guidance or control of public authority, all for the general purpose of fostering an orderly and proper physical, economic, and social development of said areas; and the President is further authorized in making said surveys and plans to cooperate with the States affected thereby, or subdivisions or agencies of such States, or with cooperative or other organizations, and to make such studies, experiments, or demonstrations as may be necessary and suitable to that end.

SEC. 23. The President shall, from time to time, as the work provided for in the preceding section progresses, recommend to Congress such legislation as he deems proper to carry out the general purposes stated in said section, and for the especial purposes of bringing about in said Tennessee drainage basin and adjoining territory in conformity with said general purposes (1) the maximum amount of flood control; (2) the maximum development of said Tennessee River for navigation purposes; (3) the maximum generation of electric power consistent with flood control and navigation; (4) the proper use of marginal lands; (5) the proper method of reforestation of all lands in said drainage basin suitable for reforestation; and (6) the economic and social well-being of the people living in said river basin.

*Tennessee River
drainage basin
development*

*Surveys authorized
Purpose*

*Cooperation with
States affected*

*Recommendations to Congress
for carrying out purposes*

*Flood control
Navigation
Electric power
Use of marginal lands
Reforestation
Economic progress*

CHAPTER X. FEDERAL REGIONAL PLANNING ORGANIZATION NEW ENGLAND AND PACIFIC NORTHWEST PLANNING PROJECTS

In this section of the report there will be described relatively new arrangements which have been made on an interstate basis for facilitating the coordinate planning of Federal and State development programs. Four phases of coordination in planning are effected through a single organization, the regional planning commission. Within each of two large interstate regions, the activities of many Federal agencies are more nearly welded into an harmonious program. Second, in the same regions cooperation between States is made possible, particularly on interstate problems. Third, adjustments between Federal and State programs are facilitated, through collaboration in planning. Finally, opportunity is afforded within the region, for nongovernmental organizations to cooperate with the Government agencies. All four phases aim toward the formulation of large scale regional plans.

The New England Regional Planning Commission and the Pacific Northwest Regional Planning Commission are the organizations which have established machinery for these purposes.⁸⁴ In the areas dealt with by the commissions it has been realized that crucial interstate development problems do exist, and that they press for collective consideration by the agencies concerned. Further, it is definitely felt that Federal policies and programs should be derived out of an understanding of local needs and desires. To a large extent it was these factors, plus the presence of strong leadership, which were responsible for the creation of the type of organization now operating in New England and in the Pacific Northwest.

The background for New England regional planning has been outlined by Dr. Charles N. Artman in the following statement: "In the last few years, New England has been organizing itself for unified action as a community. Through experience, it has been forced to learn the value of organized cooperative effort. This forward step is not accidental; it is the result of careful planning and reasoned action initiated a few years ago by a small group of men who believe in New England and who did not hesitate to challenge the doubters to look forward instead of backward. The

movement, given concrete form in a positive program by the New England council, has set an example of what can be done when a whole region unites to organize its leadership around a worth-while program.

"Speaking before a representative gathering of New England's business men a few years ago, a prominent financial leader said: 'In material things, New England is wholly sound; her troubles arise mainly from her mental attitude and lack of vision.' Observers comment on the remarkable change in point of view which has come about in the last few years. The past hard experiences, by laying the foundation for restoring its industrial vitality, have proved a real advantage in preparing the way for future regional progress and leadership."⁸⁵

In the case of the Pacific Northwest, the circumstances have been somewhat different. The whole northwestern corner of the nation constitutes a less highly developed area, a situation which does not result from a lack of resources, but rather from the relative youth of the territory. Nature has generously bestowed forests, fisheries, potential water power, wheatlands, fruit, minerals, ports, and numerous other resources upon the Northwest; but as yet the population available to develop these riches is comparatively small and sparse. This is a part of the United States where full utilization of the major resources has yet to be accomplished, and where at the same time the rate of growth in some directions has been retarded, as in certain phases of trade with the Orient. There is, consequently, a natural desire on the part of many residents of the area to seek ways of speeding up the development of their section, and to counteract any visible tendencies toward decline. The building of the Grand Coulee and Bonneville projects by the Federal Government, the proposals to canalize the Columbia and to irrigate a large area within its basin, and the recognized need for comprehensive transport, land and water planning are all stimuli to an interstate community of feeling. These forces have been strong enough to create an active regional consciousness.

For a long time New England has been thought of as a distinct section, and the six northeastern States have

⁸⁴The material for this section is drawn largely from reports of these two Commissions and from conferences and correspondence with their officers.

⁸⁵Artman, Chas. E., *New England's Industrial Prospects*, in *New England's Prospect: 1933*. American Geog. Soc., New York, 1933, p. 59 f.

often been grouped together in Federal departmental administration.⁸⁶ The States in the Northwest have been more variously grouped for Federal administrative purposes (*see* figs. 30 to 47). Late in the year 1933, the United States was divided by the Public Works Administration into 10 districts for purposes of administration and coordination. District I included the six New England States; district V included Oregon, Washington, Idaho, and Montana. Early in 1934, this arrangement was abandoned, and a district organization was established by the National Planning Board. In the latter scheme, the six New England States were again designated as a district, and the regional planning project was set up for that district. In the Pacific Northwest, the National Planning Board's district XI included Washington, Oregon, and Idaho, but excluded Montana. However, by mutual consent of the State and Federal agencies at interest, Montana was formally included in the planning region. Regional planning commissions were organized, chairmen and consultants were assigned by the National Planning Board, and these two large group-of-States regional planning projects were begun. It is significant to note that both in the Pacific Northwest and in New England the idea of large-scale interstate regional planning originated in the minds of individuals who were or who had been residents of those sections of the country. The concept arose spontaneously and the organizations were built up locally. The projects represent a direct response in the region to the need for this type of planning, rather than enterprises conceived primarily as instruments of the Federal Government.

1. The Regional Areas

(a) *New England*.—The New England region, for purposes of planning by the New England Regional Planning Commission, at present consists of the six traditional New England States, namely: Maine, Vermont, New Hampshire, Massachusetts, Connecticut, and Rhode Island.

The area in square miles and the population of the New England region is given in the accompanying table, tabulated by States.⁸⁷

"New England is essentially a patchwork of small regions of varied character. Much of it is a country of ancient worn-down mountains, a land of extremely complex rock structure. The ceaseless forces of erosion have etched out a pattern of valleys below the general levels to which the mountains were reduced far back

in geological times. The invasions and retreats of the continental ice sheets did much to accentuate the diversified quality of the surface."⁸⁸ The southern portion of New England is in part coastal lowland and in part subdued hill country, the latter further broken by three fertile lowlands developed by erosion upon weak rock—the Boston basin, the Narragansett basin, and the Connecticut lowland.

Region and State	Area, square miles	Population
New England.....	61,976	8,166,341
Maine.....	29,895	797,423
Massachusetts.....	8,039	4,249,614
New Hampshire.....	9,031	465,293
Rhode Island.....	1,067	687,497
Vermont.....	9,124	359,611
Connecticut.....	4,820	1,606,903

Northern New England is more predominantly a hilly upland, above which there rise several mountain masses—the White Mountains, the Green Mountains, and a few smaller elevations.

Climatically, northern New England is humid continental in type, with a long snow-bound winter and a short growing season. The climate of the southern portion is maritime or modified humid continental in type with a somewhat more open winter and a longer growing season.

The soils of New England fall into two general classes, the gray northern forest soils, which occur in northern New England and support a natural vegetation of northern coniferous forest; and the gray-brown forest soils, which are characteristic of southern New England and support a flora of mixed hardwood forest.

Physically New England might be described as the northeastward projection of the United States, generally rolling upland to submountainous in character, and roughly set off from the rest of the country by an irregular lowland consisting of the Hudson Valley and the Champlain lowland.

"Between southern and northern New England there are wide differences—geographic, economic, and social. The two sections may not be clearly defined * * * One section, the south, is primarily industrial; the other, the north, is largely agricultural. The industrial section embraces an area from 50 to 75 miles from seaboard, Stamford, Connecticut, to Portland, Maine. The map of that section is thickly dotted with industrial cities

⁸⁶ See accompanying maps of Federal administrative regions covering New England. (Figs. 5 to 22.)

⁸⁷ Figures are as of 1930 census.

⁸⁸ Wright, J. K.: *Regions and Landscapes of New England*, in *New England's Prospect*, 1933, p. 14.

and towns. The population is dense; and the territory is well served by railroads, waterways, and highways with dense traffic. The northerly area of Vermont, New Hampshire, and Maine, with some exceptions, has relatively few manufacturing sections. For its economic existence it depends in large part on the product of farms, forests, and quarries. The population is relatively sparse, the transportation facilities limited in extent, and the volume of traffic light.”⁸⁹

“The demands for power in New England come chiefly from eastern Massachusetts, Rhode Island, and southern and western Connecticut”;⁹⁰ an area which corresponds to the section designated above as southern New England. “Somewhat more than half of the total potential water powers remain to be developed, the bulk of which are in three drainage basins in Maine.”⁹¹

b. *Pacific Northwest*.—The States now included within the semiofficial jurisdiction of the Pacific Northwest Regional Planning Commission are Washington, Oregon, Idaho, and Montana. The area in square miles and the population of this region are given in the following table.⁹²

Region and State	Area, square miles	Population
Pacific Northwest.....	391,928	3,499,820
Idaho.....	83,354	445,032
Montana.....	146,131	537,606
Oregon.....	95,607	953,786
Washington.....	66,836	1,563,396

For purposes of comparison, the area of each of these two regions and the population of each are presented below:

Region	Area, square miles	Population
New England.....	61,976	8,166,341
Pacific Northwest.....	391,928	3,499,820

Physiographically the four Northwestern States are very diverse. In general, the area falls into four sections,⁹³ divided from one another by mountain masses. First, on the west, is the Pacific Mountain and Valley

section. Paralleling the ocean, the Coast Ranges rise to a height of from 2,000 to 5,000 feet. Farther inland the Cascade Mountains form an almost unbroken chain, rising 7,000 feet or more above sea level. The two mountain systems merge to form a jumbled mass in northern California, but farther north they are separated by a well-defined lowland, the Willamette Valley-Puget Sound Basin. This general basin area is relatively cut off from the rest of the country, with year-around access over six principal routes: Grant's Pass, leading southward, and Stevens Pass, Snoqualmie Pass, the Columbia Gorge, South Fork Valley, and Klamath Valley, all leading eastward. The Columbia River constitutes the one complete cut through the mountain ranges from the interior to the sea. The climate of the section is temperate marine in type and is characterized by cool summers and mild winters with an abundance of cloudiness and moisture. Accordingly the natural vegetation is mainly northwestern coniferous forest consisting of Douglas fir, cedar, and hemlock. The soils are of the gray-brown forest type, which, combined with the inherent traits of the temperate marine climate, lend themselves to fairly diversified but at the same time restricted agricultural use. Agricultural enterprises are directed mainly toward the production of dairy products, small fruits, animal specialties, and a variety of specialized farm crops, including flax and mint.

Second, there lies east of the Cascades the extensive lowland of the Columbia Basin. The central portion of the basin is level to rolling in appearance, and is trenched by the deep canyons of the Columbia and the lower Snake Rivers. It is surrounded by an almost continuous rim of mountains, the Cascades on the west, the Okanogan Highlands on the north, the Bitterroots on the east, and the Blue Mountains on the south. The climate varies from humid to dry continental in type. The eastern or Palouse Country is fairly well watered; farther west the country is semiarid; and in the central portion of the basin desert conditions prevail. Open mountain forests cover the surrounding mountains, but the basin proper supports a native vegetation of only bunch grass and sage. Soils of the Columbia Basin range from black prairie earths to the gray soils of the desert. From the surrounding mountains descend numerous streams, many of which are used to irrigate extensive areas of fruit and alfalfa. The unirrigated farm lands have been used chiefly for the production of wheat.

South of the Blue Mountains lie the Harney and Snake River Plateaus, constituting a third physio-

⁸⁹ William J. Cunningham: *The Railroads of New England*. New England's Prospect, 1933, p. 344.

⁹⁰ E. K. Morehouse: *Some Problems of Power in New England*. *Ibid.* p. 280.

⁹¹ *Ibid.* p. 281.

⁹² Figures are as of 1930 census.

⁹³ Pacific Northwest Regional Planning Commission. *Progress Report*, 1935, p. 9.

graphic section. These plateaus together form a great lava plain, arid in climate and covered with sage brush. The section is sparsely settled and primarily given over to cattle and sheep ranching. Here and there isolated agricultural developments have been made possible by irrigation.

Eastern Montana, the easternmost part of the area included in the Pacific Northwest planning region, lies on the Great Plains. This extensive section is separated from the other parts of the Northwest by the great Rocky Mountain barrier. It is semiarid in climate and is characterized by short-grass vegetation. Its soils vary from the "black earths" to the light brown grassland type. Agriculture consists mainly of dry-land wheat farming, and considerable areas of sheep and cattle ranching. The whole section drains eastward through the Missouri and its tributaries, the Milk and Yellowstone Rivers.

Manufacturing in the Pacific Northwest has developed principally in western Washington and Oregon, particularly along the eastern shore of Puget Sound, in the lower Willamette Valley, and in the Portland area. The more important smelting and refining activities are located in western Montana, in Tacoma, and in northern Idaho. There is some manufacturing in Spokane, Wash., and in southern Idaho.

With reference to the transportation facilities of the Pacific Northwest: the railroad net is most highly developed in western and northwestern Washington, and in the western part of Oregon. Seattle and Spokane in Washington, and Portland in Oregon, serve as railroad centers of these areas. The inland waterway system consists principally of Puget Sound and the Columbia River. The latter is potentially navigable to Lewistown, Idaho. The highway system of the Pacific Northwest serves all parts of the region with a concentration in the Puget Sound area and in the Willamette lowland.

"Potential water power is one of the greatest physical assets of the Pacific Northwest * * * The potential hydroelectric power (available 90 percent of the time) of the region is, in round figures, 16,000,000 kilowatts. Of this, about 8,000,000 is in Washington, about 4,000,000 in Oregon, and over 2,000,000 each in Idaho and Montana. That of the Columbia Basin alone is over 11,000,000 kilowatts."⁹⁴

"About 60 percent of the population of the entire region is west of the Cascades * * * The highest concentrations lie in the valley between the coast and Cascade Ranges from Puget Sound to the upper Willamette Valley. The only other large concentration is in the Spokane district in eastern Washington. Other

concentrations east of the Cascades lie in irrigated valleys of central Washington and the Snake River in southern Idaho. Montana's population lies principally in irrigated valleys and mining centers of the western part, and is highly and rather uniformly scattered in the eastern portion. Southeastern Oregon and central Idaho have extremely sparse population."⁹⁵

2. Characteristics as Regions

The existence of these two regional planning organizations is evidence in certain measure of the validity of the areas as regions, at least for planning purposes. Putting the matter in another way, these regions have been delineated spontaneously in recognition of local needs and problems, and the regional planning commissions consider them to be valid territorial divisions for use in dealing with those problems. To be sure, the immediate incentive for establishing the planning regions have differed in these two instances. In New England, the regional concept derived in part from the fact that "for the last 50 years, there has been a continuous and fairly regular recession in its relative (industrial) position in the nation."⁹⁶ This decline, together with comment on it from the outside, has caused New England leaders to undertake "a pitiless self-analysis to find out its (the region's) weak spots as well as its sources of strength."⁹⁷ As already indicated, somewhat different pressures are at work in the Northwest. In terms of its potentialities, this area is relatively undeveloped. Recently, the Federal Government has here undertaken hydroelectric and other projects of a scale beyond the immediately visible need for them, and the northwestern States have tended to group themselves together to more fully benefit by these constructions and by the general economic development which they promise to stimulate. In this young section of the country liberal attitudes make for such cooperation. And the fact that these States are situated in a far corner of the country, renders it easier for them to associate themselves together for "provincial" action. In both cases, however, the "regions" have been designed for the purposes in hand. The grouping of whole States to form the region is based in part upon the traditional American concept that the State is the primary unit of government. Here the States, with their entire areas, join for planning on an interstate regional basis.

In view of the problems of regionalism discussed from various angles in this report, we may examine

⁹⁴ Ibid. p. 17.

⁹⁶ Artman, Charles E.: *New England's Industrial Prospects*. In *New England's Prospect*, 1933, p. 55.

⁹⁷ Ibid. p. 60.

⁹⁴ Ibid. p. 86.

more closely the characteristics of these areas as "regions."

(a) *New England*.—Current opinion is divided as to the validity of delimiting New England as a region. Some maintain that New England is a region in every sense of the word. "It is the geographical region east of the Hudson Valley. It is the historical region of the Yankee. It is the ethical region of the New England conscience and of Puritanism. It is an industrial region separate from all other industrial regions, a recreational region of rugged coast, tumbled mountains, crystal streams and lakes, sloping orchards, and white-pine forests. Movements such as the one that culminated in the organization of the New England Council show that New England is not too large to have 'consciousness of community aims'." ⁸⁸

"On the other hand, the obviousness of this broad differentiation should not lead us to overlook the marked local differences within the New England section itself." ⁸⁹ "In southern New England, the social and economic institutions which serve the farmer are urban in their general character. This is not entirely true of northern New England, and in some places it is not the case to any great extent." ¹ "Every farmer in New England south of a line extending from Augusta, Maine, west to Concord, N. H., and thence to Brattleboro, Vt., and Pittsfield, Mass., may be said to live in urban territory. If farming ceases to be as remunerative as industrial or commercial employment, he can shift his employment without changing his place of residence." Part-time farming has become quite common. The section "has a vitally important place in the economic unity of the industrial northeast, where the great consuming market of America lies." ² "Connecticut has become virtually an outlying borough of New York City." ³

"In northern New England this tendency (of part-time agricultural interests in conjunction with industry) has been less pronounced, and in more remote areas it has not appeared." ⁴ Many farming areas now in operation are definitely submarginal because of small crop acreages and poor soils. "In northern New England these submarginal farms, unless they can be used as summer homes of the well-to-do, have little value unless they can be amalgamated with adjacent holdings." ⁵

"The urbanization of the Atlantic seaboard between Boston and Baltimore created an enhanced demand for lumber, always one of northern New England's prime resources." This led to a duality of interests—interest in the farm on the one hand and in the forest on the other. Later came the tourist and "little by little the resort business expanded and intensified. Ranging afield, summer people discovered that the beauties of northern New England were almost coextensive with the region, and taking in summer boarders became general among the permanent inhabitants." ⁶ Northern New England, therefore, must be regarded as a rural region, wherein small communities are set within a "periphery of resorts, backwoods, and subsidiary farms." Scattered among them are local "areas of abandonment by people and reconquest by the forest." ⁷ In these respects, northern New England presents much similarity to the adjacent Adirondack portion of New York, with its fourfold interest in forestry, resort industry, tourism, and rural living.

Americans of the older stock think of the words "New England" as connoting not only a region, but a group of traditions, institutions, and ways of living and thinking. Frequently, "New England" is used as an adjective. The older New England, however, now counts for little—directly at least—to a large newer element of the present population. The Greek mill hand of Lowell and the Polish onion grower of the Connecticut Valley, for example, are either foreign-born or only a generation or two removed from foreign soil. Obviously they are not fully subject to the traditional attitudes that make for regionalism in New England.

Certain other points of view do not argue well for regional consciousness. "In an unusually pointed newspaper article entitled, 'Is There One New England or Many?' Mr. F. O. Bennett discusses this problem. He calls attention to disunity in New England opinion. Of especial interest is his reference to a curious case of reaction against recent 'all-New England' propaganda. In November 1930, the president of the Connecticut Manufacturers' Association made a speech in which he talked of seceding from New England. As far as his State was concerned, he raised the question whether or not it benefited by talk of a 'united New England front' * * *. He would be compelled to answer 'no', if asked whether there is a New England in the sense of a region actuated by a unity of purpose and opinion." ⁸ Many persons in Connecticut depre-

⁸⁸ W. R. Greeley: *Regional and City Planning in New England*, *ibid.*, p. 406.

⁸⁹ J. T. Adams: *The Historical Background*, *ibid.*, p. 1.

¹ I. G. Davis: *Agricultural Production in New England*, *ibid.*, p. 129.

² C. E. Artman: *New England's Industrial Prospects*, *ibid.*, p. 61.

³ J. K. Wright: *The Changing Geography of New England*, *ibid.*, p. 473.

⁴ *Ibid.*, p. 139.

⁵ *Ibid.*, p. 133.

⁶ Derwent Whittlesey: *Coast Land and Interior Mountain Valley*, *ibid.*, p. 454.

⁷ *Ibid.*, p. 458.

⁸ The article referred to appeared in the *Boston Evening Transcript*, Jan. 26, 1931.

cated this statement, regarding it as an extreme stand. However, it shows that there is by no means a unanimity of opinion on the matter among New Englanders themselves.

"There are, in short, certain large problems, about which opinion is sharply divided. These are problems which cannot be solved on the basis of indiscriminate appeals to the New England consciousness and New England pride. To deal with these, it might be profitable to mark off those economic realms wherein New England is not a unit and wherein frank recognition of this fact offers the way out of perplexing difficulties."⁹

To summarize some important geographic objections to grouping the six New England States as a region for planning purposes: Industrial southern New England is quite different from northern New England, and it has a close relation with the entire manufacturing region of northeastern United States; part of Connecticut is definitely associated with the New York metropolitan area more than with New England; certain important land-use problem areas extend westward beyond the borders of Massachusetts and Vermont; the great northern recreational belt is functionally related to the whole North Atlantic seaboard city complex.

(b) *The Pacific Northwest*.—For several decades the term "Pacific Northwest" had been in general usage and has carried a regional connotation. Just what may be the dimensions of this region, however, is a matter upon which there is considerable disagreement. To some, the name applies with validity only to that portion of northern California, Oregon, and Washington which lies west of the Cascades and fronts upon the Pacific Ocean. To others, the Northwest is practically coextensive with the drainage area of the Columbia River. To still others, the States of Oregon, Washington, Idaho, Montana, and perhaps even Wyoming are to be included. In the words of the Pacific Northwest Regional Planning Commission, the area with which they propose to deal includes "not only the Columbia Basin, but Puget Sound in northwestern Washington, and that part of the Missouri Basin lying in eastern Montana, as well as the coastal areas fronting the Pacific in Oregon and Washington. All are inseparably linked economically and socially into one zone."¹⁰

The case for including these four States within the planning region probably rests most importantly on the fact that up to this time the interested individuals and agencies from widely various parts of the terri-

tory are reported to be working together in recognition of this area as a satisfactory planning region. Meanwhile, important geographic factors may be analyzed and the regionality of so large and varied an area as this may well be scrutinized, rather than accepted as an established fact. In the first place, "the distance from east to west across this area is about 975 miles, a span which is approximately the same as the air-line distance from Washington, D. C., to Kansas City."¹¹ This consideration alone would tend to destroy the regionality of the area unless it be counterbalanced by other considerations, such as some cohesion in natural and economic factors, or through transportation and communication.

The Pacific Northwest Regional Planning Commission recognizes that "three major economic subdivisions of the region should be considered."¹²

The Pacific mountain and valley section is physically so different as to possess, physiographically, little in common with the remainder of the territory. Its major assets are forests, fisheries, scenic and recreational values, and commercial and industrial sites. Two-thirds of the total population of the four Northwestern States lives in this section, a circumstance which suggests a key to its ultimate destinies.

The Columbia Basin section, on the contrary, is primarily an agricultural area, wherein economic interests center primarily about wheat and irrigated fruit crops. Its outlook is definitely rural except insofar as Spokane provides a metropolitan influence, and except as the coast cities provide exits to foreign markets. It has been said that the Columbia Basin and the coastal section are linked together because the former's relatively greatest surplus of potential hydro-electric power must find its ultimate consumption in the latter areas. However, the coastal section itself possesses great resources in water power, and power rates there are already as low as anywhere in the Nation even though possibly not as low as those in prospect for power delivered from the Columbia plants.

Except for that part drained by the upper Columbia, most of the State of Montana would seem to lie outside any logical Pacific Northwest region. The population is largely rural and its interests center about wheat farming and livestock ranching. It would seem more rational to regard this area as a portion of the Great Plains and to treat its planning problems in connection with those peculiar to that large territory.

Similarly, southern Idaho and southeastern Oregon consist chiefly of desert range broken by spots of irrigated agriculture. Based upon geographic factors,

⁹ J. K. Wright. "The Changing Geography of New England." *Ibid.*, p. 473. 474.

¹⁰ Pacific Northwest Regional Planning Commission: *Progress Report*, Feb. 1935. Portland, Oreg., p. 111.

¹¹ *Ibid.* p. 8.

¹² *Ibid.* p. 18.

these areas might be considered as parts of the great intermountain region.

The coastal section is subject to the metropolitan influence of Portland and the Puget Sound cities. Eastern Montana, on the contrary, looks eastward toward the Middle West. The coastal section tends to vote Republican, the "Inland empire" predominantly Democratic, but with strong independent third party tendencies, and eastern Montana varies from Republican to Democratic with some third party leanings.¹³ When the western part of Washington votes Republican, it is sometimes a signal for the eastern part to vote Democratic. In several instances, scientific, literary, and educational societies have been established, not for the State as a whole, but for the West and for the East separately. This differentiation is so deeply set that secessionist tendencies have at times threatened to divide the State and to unite eastern Washington to northern Idaho. All told this situation suggests that regional differentiations are deep-seated and grow in part out of the fundamental factors of resources and location, and not solely out of man-made institutions.

"There is, however, one social factor tending for regionality in the Pacific Northwest. This is the unusual homogeneity of the population of the region, which is primarily Anglo-Saxon, with a considerable colonization of Scandinavian population in the port cities and in regions favorable to the fishing industries."¹⁴

The foregoing analysis of New England and of the Pacific Northwest has revealed certain considerations regarding the degree of regionality possessed by each, as measured in natural and human terms. They are not perfect regions, as is recognized by the regional planning commissions. Due to the present necessity of operating for the regions as a whole, the commissions are attempting to reconcile these imperfections. Until such time as adjoining regional planning organizations are established, and until final determinations are made on the reasonable territorial limits of these two regional planning enterprises, they must proceed as best they can, facilitating coordination and planning among Federal agencies, between Federal and State agencies, and between the States. They have to recognize and deal with problems which may in some cases transcend the outer boundaries of their present group-of-state regions, and which in other cases may lie within sub-regions or special areas constituting only a part of the larger territory.

The discussion of the validity of these areas as regions for planning simply illustrates the fact that perfection in large-scale regionality is, in all probability, unattainable for these sections of the country. Within no matter how small an area we try to discover complete regional characteristics, we will find the problems of the steep slope different from, but associated with, those of the more level bottoms or the plateaus, the problems of power generation somewhat different from but imbedded in those of the much larger area of power distribution, the problems of abrupt social and economic differentiations between classes, races, nationalities, old families and newcomers, the difference between the region for forest conservation and the region for water conservation, and so on through each of the criteria which may be applied.

From this showing, it seems probable that the continental United States cannot be divided into a single set of sizeable regions which meet perfectly all the standards of hypothetical regionality. Compromise is indicated; the search for the perfect "region" gives way to the search for the practicable organization for regional planning and coordination, adjusted as nearly as may be to the functional areas and composite regions. The latter question is dealt with in part V of this report, and solutions are there offered for the perplexities arising from the use of groups of States in regional planning in New England and in the Pacific Northwest.

Meanwhile it does seem clear that Montana lies partly in a Northwest region and partly in a Great Plains region. Further, when large-scale interstate regional planning is organized in areas alongside the present New England and Pacific Northwest regions, it will probably be found effective for the purposes in hand to consider the regions not as airtight, rigidly bounded areas, but as flexibly-bounded regions requiring collaboration across the present regional boundaries. To facilitate such collaboration, particularly, in cases where the area to be treated for a certain type of problem or enterprise overlaps regional boundaries, it may develop that some of the States within these regions (e. g. Montana and Connecticut) should have representation in an adjoining regional planning organization. Conversely, for the same purpose, States lying outside the regions as now constituted may be given some representation in the regional planning commissions of the Pacific Northwest and New England.

3. Organization

There is a close similarity between the regional planning organizations in New England and the Pacific Northwest. In part they both owe their present exist-

¹³ Based only upon the showing in fig. 43B, but serving to illustrate differences in political allegiance.

¹⁴ Pacific Northwest Regional Planning Commission: Progress Report, Feb. 1935, Portland, Oreg., p. 130.

ORGANIZATION CHART - NEW ENGLAND REGIONAL PLANNING COMMISSION

JULY-1935

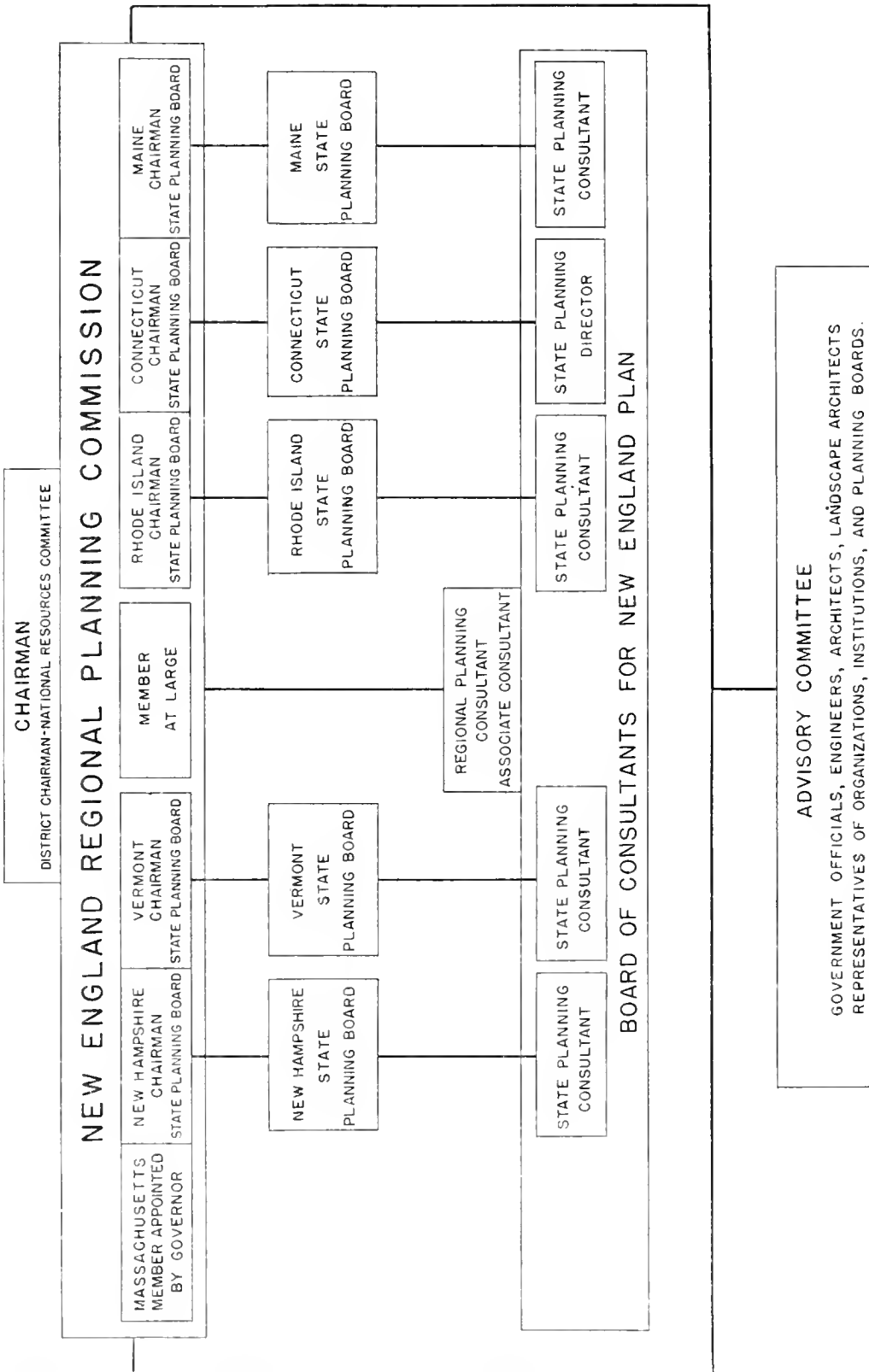


FIGURE 14.

ence to some of the "New Deal" activities. However, as already indicated, the background of the organizations differ somewhat.

New England has been planning-conscious for many years. The present New England Regional Planning Commission was immediately preceded by the New England Regional Planning League which was organized in 1929. This latter organization was in turn the outgrowth of a long period of planning interest in New England.

In the Pacific Northwest on the other hand, little if any regional planning activity preceded the present organization. This region is comparatively young and until recently has not been faced with many of the interstate type of problems which have confronted New England for years. The present planning organization in the Pacific Northwest is the result to a great extent of the desire of the people in this region to hasten the realization of their commercial and industrial potentialities.

(a) *New England*.—The New England Regional Planning Commission was formed on March 2, 1934, through the initiative of the executive officer of the National Planning Board, in cooperation with the New England Council and the regional adviser of the National Planning Board. The Commission, as first organized, consisted of the regional adviser of the P. W. A. as chairman, a representative from each of the planning boards of the four New England States where such boards existed, gubernatorially appointed representatives from Massachusetts and Rhode Island (neither of which had planning boards), and two members-at-large. The regional planning office was established in Boston, and a staff of engineers, statisticians, and stenographers was supplied by the Civil Works Administration in Massachusetts.

The present organization of the planning commission has grown out of this early organizational scheme.

One of the most important additions has been the creation of an advisory committee. It is composed of 535 New England citizens interested in planning. Of this number, 50 are Government officials, 131 represent chambers of commerce, 72 represent planning boards, 114 are officers of unofficial organizations and societies, 51 are mayors, and 117 are private individuals.¹⁵ Thus, the agencies represented on the advisory committee are many and varied. Federal agencies are represented through their field officials, such as the regional officers of the Public Works Administration, the United States Geological Survey, the Agricultural Adjustment Administration, and the Bureau of Public Roads. State

agencies, particularly departments of agriculture, conservation, public works, and highways, are represented through department chiefs or their delegates. Over 70 chambers of commerce have representation, while universities, civic organizations, and professional associations are also liberally represented.

The Commission is at present financed from various sources. The National Resources Committee compensates the chairman, consultant, associate consultant, and a staff of nine. It also allots funds for the purchase of office supplies. The Massachusetts Emergency Relief Administration (May 1935) supplies 14 engineering and clerical assistants. The various State representatives on the Commission serve without compensation, their travel expenses being paid by the individual States. The board of consultants, when attending meetings of the New England Commission, is paid by the National Resources Committee.

Officials of the New England Regional Planning Commission are inclined to regard the present scheme of organization as generally satisfactory. They believe, however, that there exists one weakness which occasions a lack of coordination between New England State planning and New England regional planning. They indicate that on matters of regional import the National Resources Committee has sometimes dealt directly with the individual State planning boards, rather than through the New England Regional Planning Commission as an intermediate body. Consequently, the Regional Planning Commission feels that it is weakened in its regional function of coordinating the plans of the Federal Government with the State planning agencies.

(b) *Pacific Northwest*.—In the fall of 1933 the P. W. A. regional adviser in the Pacific Northwest began the development of a "plan for planning" for his region. "This preliminary work consisted of an inventory of the whole field for planning in the region, tentative geographic and functional division of the field, and tentative planning organization characteristics for various levels from community to region."¹⁶

In December 1933 and January 1934, following the suggestions of the National Planning Board, State Planning Boards were formed by each of the four States—in Washington and Montana by authority of the legislatures, and in Oregon and Idaho by interim action of the governors. With the sanction of the National Planning Board and with the participation of the States, the Pacific Northwest Regional Planning Commission was then organized.¹⁷

¹⁵ New England Regional Planning Commission: Basic Data for a Tentative and Preliminary Plan for New England, June 15, 1935, p. 30.

¹⁶ Pacific Northwest Regional Planning Commission: Progress Report, Feb. 1935, p. 22.

¹⁷ *Ibid.* p. 23.

The present organization for planning is described in the Commission's February 1935 report as follows:

"Organization for planning in the Pacific Northwest now includes representation from the planning boards of the four States, the district office of the National Resources Board (now the National Resources Committee), 226 local planning bodies, and the voluntary cooperation of Federal, State, educational, business, transportation, and citizen agencies.¹⁸

"The Pacific Northwest Regional Planning Commission exists without legal status, except as inferred by the official acts creating the State planning councils, and permitting their cooperation in a regional development, and with the representation permitted by consent of the National Planning Board.¹⁹

"A parallel organization of advisory technical committees was planned, and has been carried out in part. The general divisions planned for were land resources, mineral resources, water resources and power, industry and commerce, transportation, utilities, local planning, public welfare, education, public works, public credit and finance, and legislation. Each divisional committee is, or will be, composed of a suitable number of individuals efficiently, professionally, and/or technically qualified to assist in research and planning. The regional advisory technical committees are intended to be made up, in part at least, from, and to include the chairman of the corresponding State committees."²⁰

The advisory committees of the Pacific Northwest Regional Planning Commission consist of individuals from many lines of human activity. Among the types of representation participating in the advisory work are delegates of Federal, State, county, and municipal governments, port authorities, educational institutions, chambers of commerce, railroads, public service corporations, and private corporations.

The regional planning work has been financed primarily by the National Resources Board. Approximately \$30,000 was provided for a year's operation of the regional office (July 1, 1934 to June 30, 1935), and approximately \$20,000 was allotted for all of the four State planning consultants. Additional man power has been provided through work relief agencies.

The organization described is, in general, satisfactory to the Commission. The regional consultant has, however, urged that the advisory committees should enter more vitally into the Commission's work and that each committee should be more definitely composed of representatives of organizations interested in the particular work of that committee, for example, recreational facil-

ities, transportation, etc. The potential usefulness of the advisory committees as organs for the regional coordination of field work of the various Federal departments is considered worthy of development. In 1934 it was suggested that representation of Federal departments be included in the membership of the Regional Planning Commission.

The organizational arrangements of each of these two regional planning offices (and of other similar offices which may be established) bear an important relationship to the general organization of the National Resources Committee. In making and maintaining contacts between Washington and men in the field, the multiplicity of agencies and individuals presents a difficult problem. First, there are a score or more of Federal agencies, some of them with various branches and with different headquarters and different districts of operation. Second, there are the 48 States, each with its administrative arms and political subdivisions. It would appear that instead of trying to deal directly with each of these different and widely scattered agencies and officers there would be advantage in so organizing procedures that the regional planning offices could each represent the central office of the National Resources Committee for a certain section of the country, and that through these regional offices material would flow from the central office in Washington to the other Federal field offices and to the States. And, conversely, material would flow from the Federal field offices and from State agencies through the regional planning office to the central office of the National Resources Committee. Such an arrangement is in process of being built up by the New England Regional Planning Commission and the Pacific Northwest Regional Planning Commission. Both these Commissions seem to feel that a clarification and strengthening of this arrangement would simplify and make more convenient the administrative routines of the National Resources Committee, make more convenient and authoritative the functions of coordination and reporting, and better define the essential lines of responsibility in the work.

It is interesting and significant to note that these two regional planning commissions are organized primarily as enterprises for collaborative planning by the several States involved. The membership of the commissions consists entirely of State representation, with the exception of the chairman who is a Federal officer, and with the exception of the one member at large in the New England Commission. Federal and State enterprises are drawn together by action taken in the commissions, and in fact such action is taken by representatives of the State planning boards. "The experiment is initiated * * * to conduct a planning

¹⁸ *Ibid.* p. III.

¹⁹ *Ibid.* p. III.

²⁰ *Ibid.* p. 34.

program by democratic processes through the States, with Federal aids." In both cases some of the State legislatures have recognized the opportunity to establish interstate regional planning primarily through State action. For example, the statute creating the Montana State Planning Board reads in part "Through the members of its staff the board may confer and cooperate with Federal officials and with the executive, legislative, or planning authorities of neighboring States or regions for the purposes of harmonizing the plans and policies of other State, regional, and National planning bodies with the plans and policies adopted for Montana and for the purpose of bringing about a coordination between the development of such neighboring States or regions and the development of the State of Montana." The question may arise as to whether large-scale regional planning commissions, organized as they are now in New England and in the Pacific Northwest, can be expected to convincingly and authoritatively pass upon coordinate planning for Federal enterprises. Further consideration must be given to the organization problems arising out of this and other questions having to do with the degree of authority and effectiveness to be anticipated from the regional planning operations.

It is also noteworthy that both the New England and the Pacific Northwest Regional Planning Commissions feel that interest and support on the part of a wide variety of unofficial agencies is essential to their success. The organizations are somewhat complicated by the recognition of this need, but thus far the strength of the projects in their territories seems to rest quite importantly upon the manner in which unofficial representation has been drawn in.

4. Problems, Procedures, and Accomplishments

Shortly after their creation, the New England and Pacific Northwest Regional Planning Commissions realized the necessity for an inventory of the data already available and for determination of the major development problems of the regions. In the Pacific Northwest the Planning Commission undertook a general analysis of available material pertaining to the problems of the area. In New England the groundwork for the Planning Commission's subsequent activity was laid by a study of the growth and development of the region's population, and a forecast of future population trends.

The process of "taking stock" enabled the Regional Commissions to envisage the problems toward the solution of which their planning should be directed. In New England seven major development problems emerged: land use, highway circulation, transporta-

tion, conservation, recreation, water resources, legislation, and stimulation of local planning. Especial attention has been devoted to the problems of flood control, stream pollution, recreation, forests, and highways. The Pacific Northwest Commission grouped its problems under 12 topics: basic data, land resources, mineral resources, water resources, power, transportation, industry and commerce, public works and improvements, public welfare, education, government, and legislation.

(a) *New England*.—The consultants' report²¹ outline the objectives of the New England commission as follows:

1. To prepare a plan in cooperation with State, regional, and local agencies for—

(A). The coordination of facilities for: Circulation by highway, foot trail, bridle path, and waterway; transportation by railroad, air, and bus; conservation of forests, streams, fish, and game; preservation or restoration of historic areas— forts, battlefields, buildings—areas of great natural beauty—waterfalls, views, bits of shore front—many of which are interstate in character; recreation involving coordination of plans for parkways of interstate or regional character, and reservations extending over State borders.

(B). The following area which is particularly suited to study from a regional rather than an individual State viewpoint: Connecticut River watershed.

This will involve a long-term study of immediate importance comprising joint problems in four States.

Such problems include:

Navigation.—Connecticut is particularly interested in this, but upland States control flood waters and deposit of solids. Interested groups are: State water commission, State chamber of commerce, Connecticut Manufacturers' Association.

Pollution.—This is a problem of interest to industry (navigation, land uses along banks) and involves cooperative action of four States.

Flood control.—Is of interest to all communities in watershed area and interlaced with reforestation and navigation problems. Communities on lower Connecticut pay heavy toll in damages from floods affecting civic life and agricultural (tobacco) crops.

Power.—Study of power possibilities linked with flood-control studies should be made of the entire basin irrespective of State boundaries.

Recreation.—Millions of dollars every year are lost in the valley because people leave it for other river and lake areas that can be enjoyed and are unpolluted. A study of areas suited to recreation and a plan for river parkways and reservations is a joint planning problem between States.

²¹ Joseph T. Woodruff and Frederick P. Clark: *A Plan for New England*. October 1934. pp. 2-5.

Merrimack River.—The problem on the Merrimack River watershed is similar to that of the Connecticut River. General study of Merrimack River Valley would pay particular attention to land uses along the banks and potentialities for scenic parkway and recreational opportunities.

2. Study of a program of legislation to make the above plan possible.

3. The stimulation of planning throughout New England, so that there will be public support for the above plans.

Subjects selected for early study.—Certain of the above objectives have been selected for early study. These will become important parts of the essential framework for a New England plan:

(1) Analysis of population trends.

(2) A collection of available data on existing and desirable land uses.

(3) A broad program of airways for New England.

(4) A study of transportation facilities.

(5) A New England program of limited ways for motor traffic designed to avoid congested areas; to provide accessibility to all parts of New England over modern ways designed for safety, speed, and beauty.

(6) An assembly of recommended areas for the acquisition of additional State forest and park lands.

(7) A study of pollution on the Connecticut River.

(8) A collection of available data on flood control and power development.

(9) Legislation deemed advisable in order to make possible the suggested plan.

The existence of such a preliminary plan is, from the very nature of its construction and the way in which it has been reviewed and criticized, a long step forward, from the regional point of view, toward a coordinating control for the expenditure of such public funds as may from time to time be available.

A program of public works.—The coordinated plan for New England, which we shall prepare as a long-term effort, will be the result of the activities of the several State planning agencies coordinated through the New England Regional Planning Commission. Such a plan presupposes the completion of individual State plans.

Emergency spending for public works, however, is an immediate part of the present national policy. It must be met by emergency planning, pending the completion of long-term comprehensive programs.

Through the efforts of the New England Regional Planning Commission, the necessity for intensive co-operation between State planning commissions and State P. W. A. engineers in assembling tentative and preliminary State programs to be used as guides and tests for the approval of submitted projects, is being

urged. There is, throughout New England, partly as a result of the efforts of this commission, an appreciation for the necessity for both emergency and long-term planning effort, and an eagerness to cooperate with the policies of the administration in this regard. The use of long-term plans as a guide for expenditures of available funds rather than a reason for the finding of new moneys, has been emphasized.²¹

(b) *The Pacific Northwest.*—The Pacific Northwest Commission has concentrated more particularly on land and water resources, and on water power, mineral resources, forests, recreation, and industrial development.

The staff of the district chairman, and the planning commission, augmented by a number of relief projects, has carried on, to the limit of its comparatively small resources, work and activities in stimulation and in aid of State and local planning, the assembly of basic information, and the preparation of basic maps. The work-relief method in general has not permitted proper programming and carrying out of the work, nor the employment of the specialists needed in various lines. The lack of continuity of work done on this basis has also been a serious drawback. The nature and results of the work so far accomplished will be reflected hereafter in the various exhibits.

As to results of work of regional planning organization as a whole, although organization and procedure are still in the formative state and general perspective is limited, considerable progress can be marked:

Objective, "the plan."—Clearer understanding is had of the general objective—in simple terms, a regional plan—and of the processes and work involved in its production and maintenance. The following definition is subject to further development:

The regional (or State) plan is: First, a program of research to determine the regional (or the State's) resources—physical and human, the conditions, trends, and needs; second, analyses of the findings of the research programs; third, a plan of procedure to meet the conditions and needs, consisting of (a) formulated objectives; (b) a group of general governing policies; (c) a group of coordinated general plans and estimates, in outline or framework form; all for the development, conservation, and rational utilization of the region's (or the State's) resources, for physical, economic, and social advancement.²²

Outstanding progress has been made in the region (Pacific Northwest) in the organization of local planning. Forty-one percent of the cities with over 1,000 population, and 63 percent of the counties, have plan-

²¹ Joseph T. Woodruff and Frederick P. Clark: *A Plan for New England*. October 1934, pp. 2-5.

²² Pacific Northwest Regional Planning Commission: *Progress Report*. January 1935, p. 26f.

ning commissions. Seventy-five percent of the population lives in cities or counties with planning commissions, and 65 percent of the total area has been covered by organized planning commissions. In the parts of the region where land and water are the principal problems, district and county planning commissions cover by far the greater part of the area. The more difficult task, that of encouraging and making effective this organization, remains.²³

Procedure for the formulation of a regional plan treating the problem is, in its general outlines, the same for both planning commissions. The New England commission has described its procedure as involving six steps, as follows:

- (1) Preparation of a preliminary plan by the New England Regional Planning Commission staff, based on accumulated study.
- (2) Submission of the above to the several State planning boards and representatives for criticism.
- (3) Preparation of revised plans based on criticism.
- (4) Review by advisory committee.
- (5) Adoption as part of tentative New England plan and adjustment to other features.
- (6) Revision from time to time, based on more recent information and more complete data.²⁴

In the Pacific Northwest a like procedure has been followed with a somewhat greater emphasis on the work of the advisory committee and on the device of the regional conference. The advisory committee, as was pointed out in the section dealing with organization of the planning commissions, has "divisional committees", one for each of the functional divisions of planning. Each of these committees is expected to participate actively in the formulation of a regional plan by collecting and compiling data relating to its specific assignment.

The work of the regional conference has been described by the Pacific Northwest Commission in these words:

As an essential part of its method and procedure, the regional planning conference has been adopted by the commission. The general regional conference is considered necessary to invoke and maintain the wide-spread official, technical, and public interest and support necessary to the assembly of information and to the development of plans. The general form of the conference is a series of parallel meetings of divisional or functional groups focusing into a final general meeting.²⁵

The regional conference held in December 1934, for example, was attended by over 600 persons, met for 3 days, and was assigned a 5-point program:

²³ *Ibid.*, p. 5.

²⁴ Joseph T. Woodruff and Frederick P. Clark: *A Plan for New England*. October 1934, p. 1.

²⁵ Pacific Northwest Regional Planning Commission: *Progress Report*. January 1935, p. 25.

To receive and consider reports of the planning programs in the Pacific Northwest.

To consider State and regional applications of the current National program for land and water utilization.

To present planned uses of public works, including the large power projects, in relationship to other factors of social-economic advancement.

To assemble those persons who are qualified to deal authoritatively with appraisal and use of natural resources with reference to establishment of the human values that are of chief concern in a recovery program.

The planning and stimulation of further progress.²⁶

It is manifest that these regional planning enterprises have undertaken a very wide field of work. It is equally evident that, due to various circumstances, they are still only in the formative stages. The accomplishments of the regional planning commissions to date consist principally of the gathering of information bearing on the natural and human resources of their respective regions, the analysis of that information and its application to enterprises for the development of the regions, the stimulation of planning activities for States and cities, and the dissemination of the commission's recommendations among governmental officials and influential persons interested in development work. It is considered not the function of the commissions to construct the projects they believe desirable, nor actively to lobby for legislation authorizing such projects.

During the period while these regional planning projects are getting under way, both the Federal and the State Governments are proceeding to make surveys, to formulate policies, and to undertake specific enterprises which it has not been possible in some cases to "clear" with the regional planning commissions. This situation, while unfortunate as viewed from the standpoint of effective regional planning, is to be expected during the early stages. In carrying out their appropriate functions the regional planning commissions as now organized, or as modified, may succeed in more and more effectively serving as a clearing house for the integration and reconciliation of all major interstate governmental development enterprises which involve Federal, State, and local governments.

In this connection, it is noteworthy that the Pacific Northwest Regional Planning Commission is now (August 1935) working officially on the preparation of a report which it is hoped will be helpful in determining the type of organization which should be set up for the planning, construction, and operation of certain public works in that area, with particular reference to power generation and distribution, navigation, and irrigation in the Columbia Valley.

²⁶ Pacific Northwest Regional Planning Commission: *Proceedings of the Pacific Northwest Regional Planning Conference*. December 1934, p. 17.

5. The Regional Planning Commissions Compared with the Tennessee Valley Authority

Although the broad objective—farsighted, planned development of large interstate areas—is the same, these two regional planning enterprises have thus far been quite different from the operations of the Tennessee Valley Authority. In origin, particular objectives, delineation of regions, and organizational status there are marked differences between these two types of regional agency.

The T. V. A. had its origin in the fact that at Muscle Shoals there existed a large Federal power project susceptible of further utilization. The further development of hydroelectric power in conjunction with navigation, and the corollary enterprises of flood control, manufacture and distribution of fertilizer, reforestation, erosion control, etc., were put together as a composite project lying mainly in the valley region and implemented through the creation of a Federal public authority. The New England and Pacific Northwest regional planning projects were organized in response to the recognized need for general coordinate planning at some convenient planning center, to develop integrated programs for the execution of large development works, and particularly for interstate development.

The objectives of the T. V. A. have been closely related to the planning and development of navigation and electric power projects. The several other major enterprises, though important in themselves, have been more or less identified with the power program. The work of the regional planning commissions has had a less well-defined focus. The field has been open for planning for the underlying development problems of the regions. Although these problems have been narrowed to the more pressing necessities of conserving and utilizing natural resources and, in the Pacific Northwest, to the problems of power distribution and use, consideration has also been given in the first instance to redistribution of population, industrial development, and other broad spheres of planning.

Since their origins and particular objectives differ somewhat, it is but natural that the delineation of the region for the T. V. A. and for the regional planning commissions should have proceeded upon different principles. The Tennessee Valley is a large interstate drainage basin well-suited as an area for the treatment of certain outstanding water-resources problems. The New England and Pacific Northwest Commissions serve regions based as much upon a recognized community of interests as upon the coincidence of development-problem areas. As has been seen in the

description of the organization of the two commissions, the cooperation of State governments and particularly State planning boards is an important phase of their work. As a consequence, the regional boundaries do not follow watersheds, as do those of the T. V. A., but group whole States together.

A comparison of the area and population of the Tennessee Valley, New England, and the Pacific Northwest is presented in the following table:

Region	Area, square miles (approximate)	Population (approximate)
New England.....	62,000	8,000,000
Pacific Northwest.....	392,000	3,500,000
Tennessee Valley.....	42,000	2,000,000

In organizational status there is a marked difference between the T. V. A. and the two regional planning projects. The T. V. A. was created by act of Congress and is constituted as a Federally-owned authority. The New England and Pacific Northwest Regional Planning Commissions are voluntary, semiofficial bodies possessing no statutory powers and operating only under the sanction of the Executive orders creating the National Resources Committee and of those State planning board statutes which permit certain of the State planning boards to collaborate with other States and with the Federal Government.

The T. V. A.'s finances rest upon large grants and bonding power for use under the terms of its act. The regional planning commissions thus far draw their meager funds from the National Resources Committee and from the Federal relief agencies. The capacity of the T. V. A. to effect its purpose through persuasion is greatly enhanced by its possession and beneficial use of large funds; the two regional planning commissions must in the main depend upon their assembly of information and upon more or less voluntary collaboration and cooperation.

The T. V. A. is managed by a board of three directors appointed by the President and responsible to him and to Congress. The regional planning commissions have chairmen and consultants appointed by the national resources committee, commission members appointed by State Governors, and committees selected by the commission. The commissions are operating through several lines of responsibility—to the National Resources Committee, to those Federal and State agencies from which committee personnel is drawn, and to the State governments through their State planning boards.

The T. V. A. has enlisted technical personnel from all parts of the country; the regional planning offices have drawn entirely upon personnel resident in each of the group-of-State regions, respectively.

The T. V. A. being a purely Federal corporation, has found it desirable to make arrangements, both formal and informal, for collaboration with the States and their agencies. The New England and Pacific Northwest regional planning projects include in their organization representation from the States; collaboration and cooperation among these States, and between them and Federal agencies, are secured directly through this organizational arrangement.

Finally, and perhaps most important as a distinction between these two types of enterprise, the T. V. A. carries out, through its own organization, functions of research, survey, experimentation, planning, designing, constructing, operating, and effecting coordination, all within the range of the congressional act creating it. The New England and Pacific Northwest regional planning commissions deal with research, survey, overall planning, and coordination for both Federal and State programs. The range of problems dealt with is similar for the two types of organization, but the T. V. A. not only plans but actually carries out a number of large undertakings.

6. Relationship to Proposed Interstate Development Authorities

As described in an earlier section of this report, the creation of the Tennessee Valley Authority has paved the way for the proposal of other similar authorities. More than a dozen bills have been presented in the Seventy-fourth Congress, proposing river valley authorities which would be empowered to deal with certain basic problems relating to flood control, navigation, development of hydroelectric power, stream pollution, erosion, and reforestation. In New England, measures have also been proposed for the creation of interstate rather than Federal authorities. These proposals call for consideration of the relationship which the development authorities would bear to the regional planning commissions.

(a) *New England*.—Of the river valley authority bills presented in the Seventy-fourth Congress, two directly concern New England. H. R. 4979 proposes the establishment of a Connecticut Valley Authority, the activities of which would center in the Connecticut River Basin, lying in Vermont, New Hampshire, Massachusetts, and Connecticut. H. R. 6233 provides for the creation of a Merrimack Valley Authority, with power to carry on development projects in the Merrimack River Basin, lying in New Hampshire and Massa-

chusetts. These proposed valley authorities are identical in organization structure, in powers, and in objectives, differing only in the area covered.

Since the Connecticut and Merrimack Valley Authorities would operate in areas comprising the very heart of New England, it is desirable that their relations with the New England Regional Planning Commission be clearly defined. Neither of the two bills before Congress touches upon this matter; in their context they do not recognize the New England Regional Planning Commission.

It is perhaps in part because of the failure to provide for the participation of New England organizations, such as the Regional Planning Commission, that the Federal valley authority proposals are opposed at some points in New England itself. This opposition also derives from the strong, traditional New England attitude against "Federal control."

The establishment of New England development authorities through interstate compacts is a possible alternative to the creation of Federal corporate authorities. In New England it is contended that such arrangements would eliminate the Federal Government as sole or principal participant, would tend to preserve the powers and rights of the individual States, and would ensure that regional development projects would be administered by New Englanders. The water resources committee of the New England Regional Planning Commission has accordingly urged this device in preference to the Federal corporate authority. The committee observes:

1. The investigation, planning, and development of river basins should be comprehensive and deal with the river and its tributaries as a whole.
2. On intrastate streams such procedure may be under State control and presents no serious obstacles in respect to authority.
3. On interstate streams agreements or compacts between the various States included by a river basin are essential to enable treatment of the basin as a whole and to make it possible to comprehensively investigate and develop its water resources. This may require some enabling Federal as well as State legislative action as a basis for bringing the States together and procedure by the various States in making such compacts with each other.
4. The provisions of H. R. 6233 for the "Merrimack Valley Authority" now before Congress (April 1935), are completely at variance with the method of State control of river basins previously suggested, and in fact would place that power in a commission appointed by the President and under Federal control.
5. Such Federal legislation, if enacted would place large portions of New England under Federal control, and in a State like New Hampshire this would mean more than three-fourths of the State area thus segregated.
6. The committee is therefore of the opinion that in place of the bills H. R. 6233 and H. R. 4979 there should be substituted enabling bills in forms acceptable to the States in-

volved and which will provide for, and encourage, the adoption of interstate compacts as a basis for the investigation and development of water resources by the various States.²⁷

Bills have been drafted to create interstate authorities by State legislation and to provide for congressional sanction of the powers granted to such authorities.

(b). *Pacific Northwest*.—There are two proposed interstate valley authorities that concern the Pacific Northwest Regional Planning Commission. The Columbia Valley Authority, proposed in S. 869 and H. R. 6126, would include within its jurisdiction the Columbia River Basin, which lies mainly in Washington, Oregon, Idaho, and Montana. The Missouri River Valley Authority proposed in H. R. 4241, includes, within the Pacific Northwest Region, only the eastern two-thirds of Montana. These two authorities would differ both in design and in operation.

A distinctive feature of the Columbia Valley Authority, as proposed by Senator Pope, is the provision for "an advisory board composed of the Pacific Northwest Regional Planning Commission, composed of the State planning boards of Idaho, Oregon, Washington, and Montana, and representatives of the Secretaries of Interior, War, Agriculture, Commerce, Labor, and of the Emergency Relief Administrator."

The Missouri Valley Authority bill has no provision on the relationship of the proposed Authority to the Pacific Northwest Regional Planning Commission. That portion of Montana included within the basin of the proposed Authority lies east of the Rocky Mountains, and is probably less definitely an integral part of the Pacific Northwest than any other area now under the Regional Planning Commission's aegis.

In the northwestern section of the country there seems to be little if any articulate opposition to the execution of certain major development enterprises through the agency of a purely Federal public authority. However, it is emphasized by the Regional Planning Commission that the policies and programs of such authorities should be formulated in response to local desires and local knowledge. The Commission considers that its facilities for coordinate over-all planning may be utilized to good effect in the formulation of these policies and programs.

Many problems surround the determination of the most effective organizational arrangements for regional planning and development in the Pacific Northwest. In fact these are the very problems toward which the present report is addressed. Should regional planning be organized separately from regional development

agencies? If so, what should be the working relationship between them? If not, should the over-all planning function be included among the functions of the development agency of the special authority where it is set up? In any case, what should be the areas of operation and the types of enterprise planned and carried out in a coordinate way?

These questions are discussed in part V. It may be appropriate to set forth here one principle which seems to emerge from our review of the Pacific Northwest and New England. Overall planning, the formulation of integrated policies and programs, the determination of degrees of participation, the initiation of legislative measures, and the reflection of local human attitudes, should all precede the actual development work, and they should keep ahead of that work. In other words, whether the over-all planning function lies in the development agency or separately in a planning agency, the planning should precede rather than follow the authorization of major projects. With that sequence established much less importance attaches to questions of which agency or which type of agency carries out the programs.

7. Authority and Responsibility

As described above, neither of these two major regional planning commissions possesses any definite statutory authority. As matters now stand, their findings and recommendations are effective only to the degree that they are voluntarily accepted by the Federal and State governments. It is true that the persuasive power of assembled knowledge is considerable, and that those agencies taking part in the formulation of regional plans will ordinarily deviate from those plans only in situations where there is important disagreement. The efficacy of round-the-table reconciliation of conflicts and the derivation of composite, integrated programs may be depended upon to go a long way toward the official acceptance of the regional planning recommendations. Joint discussion and persuasion are the channels through which these two regional planning commissions must and do now operate; and both commissions feel that, for the time being, no statutory or formal authority is critical in making their work effective, although more definite recognition is considered desirable.

However, we may try to look ahead in this type of work, and a major question must be raised: In case of out-and-out conflict, not possible to reconcile around the council table of the regional planning office, where does the responsibility rest for making final determinations which will avoid waste and dissatisfaction? Issues of great public importance may

²⁷ Letter of Apr. 18, 1935, from H. K. Barrows, chairman Water Resources Committee, New England Regional Planning Commission, to Victor M. Cutter, chairman.

be expected to arise in this way. For the New England and the Pacific Northwest regional planning commissions, no satisfactory answer to the question could now be given. Meanwhile, there is some danger that the commissions' work may be recognized and utilized in theory but not in fact, that the agencies participating may reconcile and integrate their programs only to the degree which seems convenient at the moment.

In addition to the absence of clearly defined authority, the lines of responsibility are not clear. The commissions are made up predominantly of State planning board chairmen, each one responsible most directly to his State administration. The chairman of each of the commissions is most directly responsible to the national resources committee, as also are the consultants. Likewise, the Federal representatives on advisory and technical committees are each responsible to a certain Federal agency, and the State representatives each to a State agency or a State government. As commissions and committees, they can, when they agree, issue commission findings and recommendations. If any representative disagrees on a critical issue he would appear to be free to advise his superiors to ignore the findings. The lines of responsibility are somewhat diffuse, and this, added to the lack of defined authority, may lead to impotence in the event of inability to reach agreement among members actually representing different governmental agencies. A number of such impasses might so discredit the planning enterprises as to result in their ultimate failure and disappearance from the scene.

As experiments in a new type of inter-governmental planning work, the New England and Pacific Northwest projects will illuminate these problems, and they will probably find their way through to satisfactory solutions.

If we conceive of similar regional planning and coordination established for all parts of the country, through anywhere from 10 to 20 regional planning enterprises, these questions must be faced.

8. Summary of Conclusions as Related to Certain Problems Examined in this Report

These two regional planning operations represent an entirely new form of organization for planning. Their life has been brief; they have had only meager funds for their work. They possess little direct authority and their lines of responsibility have been somewhat indefinite during this formative period. They may be considered experimental and subject to reshaping as the problems and procedures are clarified. Final conclusions cannot be drawn at this time. However, for purposes of this report, the findings here set

forth have been derived from the present study, and they have been reviewed by the chairmen and the consultants of the New England and Pacific Northwest Regional Planning Commissions.

1. In these two sections of the country there is a recognized need for formal, more or less official organization of staff work in the field with reference to the formulation of integrated policies and programs for Government development enterprises, and particularly for development enterprises of an interstate character.

2. From the point of view of the Federal Government, a first function of such organizations is to facilitate coordination and composite advance planning for Federal programs.

3. The nature of the processes involved in the advance planning of Federal programs requires that the organization include facilities for coordination between the Federal programs and the State programs, and also between the State programs themselves. This phase is perhaps most important from the point of view of the States.

4. The need is for organizational arrangements which will make it possible for the preparation of coordinate development plans and programs to precede and keep ahead of the phases of legislation, appropriation, and execution. The actual development projects should take form as integral parts of well-considered over-all plans which have been prepared in advance and revised periodically to meet changing circumstances.

5. For carrying out these functions, as distinguished from the direct administration and execution of enterprises, the New England and Pacific Northwest regional planning commissions have made a good beginning. These two projects constitute very valuable experiments and demonstrations in the solution of the problems which are raised in this report.

6. As solutions of these problems, they are not yet completely satisfactory. It is believed that for each of them certain modifications of the present arrangements are suggested by their experience.

7. In neither case does the region as now constituted represent perfection in regionality. It is considered that the boundaries of regions should not be allowed to divide problem areas or functional areas which extend outside the region. Hence, the regions may be held to be not rigidly bounded, but flexible, extended to include all of a problem area which projects beyond the region or contracted to exclude part of a problem area which should be treated in the first instance by an adjoining similar regional planning agency. We are led to consider the concept of the regional planning center (developed in pt. V) as a means to obviate some of the difficulties with regional boundaries.

8. In recognition of the overlapping problems and functional areas, certain additional States might be given some form of representation at these two planning centers, Boston and Portland. Conversely, Montana may have representation in an Upper Missouri regional planning center, and Connecticut in an eastern regional planning center, as well as in Portland and Boston, respectively. It is not impossible that, later on, these two first regions may be differently delineated; but that should be done only on the basis of longer experience.

9. It is suggested that further consideration be given the matter of including responsible representation of Federal Departments in the regional planning commissions.

10. It is not improbable that, for effective operation, somewhat larger funds and more adequate staffs will be required. As the usefulness of the work becomes more apparent, it may reasonably be expected that Federal departments and State governments will participate in the financial support of the work.

11. These two organizations are and should continue to be extremely useful instruments in building up the background on which wise determinations can be made with reference to the need for any new execution agencies, particularly any new special authorities, with reference to the form such new agencies should take, their functions, and their areas of operation, and with reference to the desirable type of working relationship

between such agencies and the Regional Planning Commission and other planning agencies. The Regional Planning Commissions' present studies of proposed Federal special authorities should be most valuable.

12. If it should eventuate that special authorities are set up, it is probable that the authority's field of operations, both functionally and areally, would be more limited than that of the regional planning commissions as here conceived. Coordination and planning would continue to be essential for enterprises and areas outside the range of the authority, and also between the authority and other Federal and State programs. There is advantage in coordination and program-making through an organization detached from construction and operation responsibilities. An authority might have full representation in the general regional planning organization; it would probably have its own planning and designing branch; and it could use the facilities of the regional planning center in much the same way that other development agencies would use them.

13. Perhaps most important of all, the effective use of the regional planning organizations requires that the Federal and State Governments endow them with a definite degree of responsibility, and recognize their findings as authoritative within limits definitely established. Correspondingly, the lines of responsibility through which they operate would then be clarified.

PART IV

GEOGRAPHIC FACTORS AND CRITERIA

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CHAPTER XI. THE NATURE AND EVOLUTION OF THE REGIONAL IDEA

In part II, various data were presented to show that regional factors are embedded in many functions of government, and that the problem of regionalism tends to emerge persistently at the various governmental levels—local, State, and national. In part III, certain attempted solutions of the problem were set forth, discussed, and where possible evaluated. The next step might logically be to pass on to the task of drawing conclusions and making recommendations regarding the use of regions in national planning and their role in effectuating planned development. Before doing this, however, it would seem desirable to introduce an entirely different set of considerations into the picture, in the hope of casting light upon the problem and providing a sound basis for judging certain questions inherent in it. The present chapter is, therefore, devoted to a discussion of the geographic factors which are implicit in regionalism and the criteria which may be brought to bear upon the whole question of regions.

At this point, it may be recalled that throughout modern times there has been a small group of scholars who have been engaged in studying regions—their nature, extent, characteristics, and application to social investigation. The resulting body of knowledge is commonly called “chorography” or “regional geography.” The findings of such students shed considerable light upon the nature of the region and the significance of regional elements in any given situation. The chorographers, or regional scientists have, however, focused their attention upon the region itself rather than upon the question of employing it in the realm of government. Consequently, while their findings are entirely valid, the problem of translating them into administrative reality remains to be solved.

The whole purpose of this part of the report is, therefore, for definition and clarification. It presents a set of considerations which the planner and administrator should analyze and face seriously before implementing his programs and translating them into areal terms. No one can predict what will be the lines of regional consciousness in the future, nor forecast in what way it will impinge upon future policies of public administration. On the other hand, this should not result in an arbitrary allocation of areal jurisdiction, nor in leaving to chance or spontaneous influences, the drawing of regional lines. Nor is the problem most advantageously solved solely by devising new

administrative arrangements and leaving them to generate their territorial spheres through trial and error.

For these reasons, the considerations presented in this chapter are not intended as recommendations, but as materials which should be balanced against practical policy-making, within which there is always a strong urge to proceed empirically.

1. Regionalism and the Region

At the outset, it may be pointed out that “regionalism” is a clustering of environmental, economic, social, and governmental factors to such an extent that a distinct consciousness of separate identity within the whole, a need for autonomous planning, a manifestation of cultural peculiarities, and a desire for administrative freedom, are theoretically recognized and actually put into effect. Regionalism is something which remains to be realized and further developed, as well as a phenomenon which has already appeared and taken form. In one sense, and perhaps the best one, regionalism is a way of life; it is a self-conscious process. Regionalism can be a very effective instrument in the planner’s hands. The extent to which he may use it depends upon the objective and the enlightenment of those who perform the planning function. In this connection, the planner should keep constantly in mind, the admonition that, “it is exceedingly important to approach the question of planning as if something were actually going to be done at some given time.” Regional factors will enter into the planner’s reckonings in direct proportion to his practicality or approach and his belief in the possibility of putting his program into operation.

As the creative state supplants the police state, as the Nation becomes aware of its national resources and the necessity of conserving and using them in the national interest, as the problem of distribution is added to the control activities of the State, governmental plans and administration will transcend existing political jurisdictions and will usually exhibit regional peculiarities. The validity of this statement may be tested by observing the principal problems with which government has had to deal in this period of depression and reconstruction.

Regionalism, as defined in these terms, is not to be entirely identified with that political segmentation which we have been wont to call sectionalism. Regional

factors are of particular importance today, even in a nonpolitical sense, because the functions and activities of government are undergoing a process of growth and change as planning replaces "laissez faire." Sectionalism in the political sense is probably inevitable, but regionalism is not. Regionalism as a background for planning must itself, therefore, be carefully planned for and nurtured.

Finally, we may refer to what is sometimes called cultural regionalism, namely, the development of distinctive social patterns and folkways such as those found in the South, in New England, and in every major portion of the country. These are not the only interpretations which can be put upon the term "regionalism", but they should suffice to show that the phenomenon manifests many different aspects.

Regionalism is not merely a manifestation, however, it is a problem and a necessity. Nevertheless, it is an abstraction which takes on form, shape, and reality only as it is expressed in the region. Is it possible, then, to develop a concept and definition of the region which will be in accord with actual developments which have already protruded themselves upon the national consciousness, and at the same time will form the foundation of that solution between the several levels and functions of government which is so much needed at the present time—not only in the field of execution but also in the more recently emphasized field of planning technique and procedure? Anyone who has observed the over-centralization (and sometimes ineffectuality) of national government and who at the same time has been impressed with the limitations of State government, will be inclined to agree with Professor Odum's statement that, "More and more, regional analysis becomes the first essential for public administration."¹

Many planners believe that regions are the most logical and practicable units of planning. This is based upon the feeling that in any program of national planning they would seem to be useful both as a means of grouping human and physical resources in such a way that these can be viewed in correlation, and as instruments for facilitating certain desired programs. The concept of the region, therefore, merits thorough examination and careful definition.

Two meanings have been commonly attached to the term region: One, that it is a device for affecting control; the other that it is an area possessed of certain attributes. The former would denominate the region as an abstraction, the latter would make it concrete in character. These two ideas have, of course,

originated from different premises, and grown up through different lines of thinking and experience. The concept of the region as an area with definite inherent attributes has arisen among those who have long been engrossed in studying environmental realities, whether physical, social, or economic. These workers have concentrated their efforts upon discovering a means of grouping such phenomena for study, description and analysis, and have been but little concerned with any wished-for ends or objectives. The concept of the region as purely a device for control has, on the contrary, arisen among those who have been engaged in the equally valuable study of the abstractions of societal regulation and administration. Such workers have had little if any concern for the physical realities involved, because questions of administration and control have occupied the center of their attention. Consequently, they have come to regard regions as means to an end rather than entities growing out of physical realities themselves. In brief, the former idea represents an evolution out of environmental realities; the latter a devolution from an administrative objective or end sought.

These two ideas of the region, if applied separately are mutually exclusive because they tend to deny one another's validity, but the conflict thus engendered is actually more apparent than real. Moreover, the nature of the planning problems which face the country are such that both connotations must be attached to the region or else its maximum usefulness cannot be realized. There is, therefore, clearly called for an integration of the two ideas and a reconciliation of the premises underlying them.

2. The Reality of Regions

It is believed by many that there are no regions "per se", but that such divisions exist only when created or designated for special purposes. This is probably the result of the fact that no final set of regions for the United States has as yet been delineated and given common recognition. Actually this has had to await the accumulation, localized as to place, of qualitative and quantitative data bearing upon climate, soil, and land form; manufactural production, employment, and power consumption; marketing, distribution, and many other factors. Even with these at hand, the fluidity of American society on the march has retarded precise regional delineation. In spite of this, regional consciousness has been present in this country, almost from the beginning of colonization. The settlements at Charleston, Jamestown, and Plymouth soon expanded and grew into neighborhoods, and these in turn de-

¹Howard W. Odum: *The Regional Approach to National Social Planning*, Foreign Policy Association, 1935.

veloped into larger regional entities. For example, from the original site at Charleston, settlement extended up the Santee, Congaree, and Edisto rivers, and through the winding channels onto the coastal islands of South Carolina, until plantation and cross-road settlements merged into a region bound together by a community of interest among a homogeneous people. This represented an adjustment to fertile moist soil and warm climate favoring production of sea island cotton and rice along channels where ships of that time could enter to load these cargoes for outside markets. Upon such a base, a distinct set of cultural and economic interests arose, interests which later spread over the entire southeastern portion of the country. This has produced a distinct and universally recognized region—the “South.” Its boundaries are today rather indefinite, but in general they coincide with the shifting limit of the Cotton Belt. But “the limit of a region is after all not the critical factor; it is the qualities of the area within it which are of major geographic significance. The northern limit of the American Cotton Belt varies according to the price of cotton and with new techniques of production but the Cotton Belt remains” as a constant reality.²

Along the eastern seaboard, extending from southwestern Maine through Boston, New York, and Philadelphia to Baltimore lies a great area of manufactories using Pennsylvania coal, electric power, products of steel mills, and cotton, silk, wool, rayon, and leather—linked by rail to markets throughout the country, and by water to those of Europe and Asia. Farther west, the coal of western Pennsylvania, linked to the iron ore of Minnesota by the Great Lakes, and to the markets of the Middle West, the South, and other parts of the country by roads and railroads; and utilized by a people with vision to possess the land has resulted in the great manufacturing area which extends across Ohio and Pennsylvania. Heavy machinery and motor vehicles, all requiring much steel, are fabricated here close to the steel mills. Textiles of cotton, rayon and wool, and rubber tires and a great variety of other goods are produced in quantity here. Together these two areas constitute a regional reality, a land of smoking mills and busy factories, of industrious ports, railway centers, and commercial foci.

Similarly for the Middle West which, though its boundaries have never been demarked precisely, is a real entity in American life. To some it may have no more substance than a nostalgia for a landscape of prosperous farms checkerboarded by a rectangular

grid of roads, of white houses and big red barns, and elm-and-maple shaded villages; but in the economic life of the Nation it is a unique entity. The Middle West, or the Midland, as it might more properly be called, is one of the finest agricultural regions of the world, and America's greatest surplus food producer. Scattered through it, but not overshadowing the region's agrarian interests, are agricultural implement factories, flour mills, establishments for the production of corn products, and foods and feeds of many varieties and brands.

This sort of analysis might be extended so as to cover the entire country, but the examples given are sufficient to show that regions are realities rather than abstractions, and that there are definite and recognizable subnational units within the national whole.

3. Definitions of Regions

In common parlance many unlike things are called regions. It would, indeed, be difficult to find another important subject upon which more contradictory and even mutually exclusive opinions are held. When the various systems of regions which have been outlined for practical purposes in the United States are examined, it becomes obvious that while they are used for comparable purposes, they have been delineated upon widely discrepant premises. (See Chapter VI *et al.*) Indeed, so many vagaries of thinking attach to the word region that there is need for considerable clarification of the term, in order to avoid becoming bogged down in inconsistency. As pointed out by E. S. Draper, dictionary definitions do not help much in the process of clarification.³

Available definitions fall into three groups: (1) The generalized abstractions of the dictionary which in fact actually define “area” rather than “region”; (2) those which denominate a region as a grouping or combination of static elements, and (c) those which treat the region as a dynamic and vital unit.

(a) *Indefinite areas*.—The region as an areal unit whose limits are laid down by other than arbitrary political circumstances is a concept old enough to be given in dictionaries, but most of these definitions are so vague as to be almost meaningless. The New International Dictionary defines region as a large tract of land; one of the large districts or quarters in which any space or surface is conceived of as divided; hence in general, an indefinite area, a country province; district; tract.⁴ The Century Dictionary explains it

² R. B. Hall: The Geographic Region: A Résumé in the Annals of the Association of American Geographers, vol. XXV, no. 3, September 1935, pp. 122–130.

³ E. S. Draper, Regional Planning and the Tennessee Valley Authority. Lecture before the Harvard School of City Planning, Jan. 14, 1935.

⁴ Webster, 1934.

as any considerable or connected part of space or surface; specifically, a tract of land or sea of considerable but indefinite extent; a country; a district; in a broad sense, a place without special reference to location or extent: As the equatorial regions; the temperate regions; the polar regions.⁵ The New Standard Dictionary puts it in rather meaningless terms, e. g.: "a portion of territory or space, of indefinite but considerable extent." A qualifying statement, however, is added, to the effect that there are specific kinds of regions which are characterized by definite traits such as flora, fauna, etc.⁶ This qualifying statement puts by inference an entirely different complexion upon the concept than does the definition proper, because a type of flora, for example, has a fairly precise limit, and hence a region so defined implies a recognizable and distinct area. The New International Dictionary defines the adjective regional in somewhat more significant manner * * * "of or pertaining to a region or broad district, as opposed to local (e. g., regional geography)."

(b) *Areas set apart by unique but static elements.*—In contrast to these vague abstractions, there are numerous examples of the region being defined in concrete and precise terms. Josiah Royce states that a province, section, or region is any one part of a national domain sufficiently unified physiographically and socially, to have a true consciousness of its own customs and ideals, and to possess a sense of distinction from other parts of the country. Hugh R. Mill, in discussing Regional Geography, in the Encyclopedia Britannica, says: " * * * The scope and bearing of geography can only be fully grasped by the systematic study of a definite region * * *. The material for regional studies is enormous but it is doubtful if it is anywhere complete. The regional idea has been fruitful in developing the most recent geographical research in all parts of the world." One infers from such statements that it is frequently recognized that areas may be differentiated by either their human or physical elements or both. These elements, however, seem to be regarded as static or at least passive, and regional study is viewed as a rationalizing process. Put to practical use, this enables students of the natural and social science to "regionalize their data" thereby facilitating classification, description, and analysis. Out of this procedure have come agricultural, physiographic, climatic, linguistic, industrial, and other types of regional groupings.

This has been stated significantly by Robert B. Hall, as follows: "The regional concept has furnished to

history the doctrine of sectionalism, to anthropology the culture area, to sociology the total situation, to economics the economic domain, to biology the biotic area or region. In the field of politics the concept of the region is proving an increasingly important help to the intelligent functioning of government as well as helping the group to understand its position and possibilities."

(c) *Areas of dynamic entity.*—Many students in the fields of geography and the other social sciences, see the region as a dynamic, everchanging entity, whose interrelated physical and human factors are altered in the course of time. They view it as an area within which interacting and interplaying relationships combine to form working realities, which can be applied in meeting human needs and solving human problems.

Viewed in this light "a region may be regarded as a spontaneous expression of physical and psychological differences. Regions are genuine entities, each of which expresses, both natural and cultural differentiation from its neighbors"—(George T. Renner).

The study of regions, i. e. " * * * regional geography may be recognized as the culminating branch of the science * * *; regional geography properly is concerned only with the mutual relations between men and the natural environments of the regions or areas in which they live * * *. A consideration of an uninhabited region gains geographic quality only when environmental elements there existing are considered, particularly in conjunction, from the standpoint of the advantages and disadvantages of the region for human occupation and use—(Harlan H. Barrows).

Most branches of knowledge have to deal with area. From this simple fact and its multiplied bearings flows one of the most important values of geography in studies that deal with mankind. In going from the abstraction area to specific regions, geography provides: (a) A framework of physical facts, region by region, the world around; (b) unifying explanations of physical phenomena in terms of laws evolved through experimental methods or by elaborate testing of hypotheses following both inductive and deductive methods; (c) an identification of regional characteristics, physical and human, through detailed statistical methods and by field notation; (d) a comparison of regions with the object of widening the generalities of physiography and human experience that have their bases in local and detailed observation * * *. So diverse are the data of human geography and related subjects that there is naturally, inevitably, and wisely a very great difference in the concepts evoked by the word "region", in the field methods employed, in the degree

⁵ The Century-Appleton Co., New York, 1931.

⁶ Funk & Wagnalls, New York, 1931.

of importance claimed by the physical environment, and in the usefulness of regional geographical studies to scholars in other disciplines. These diversities may diminish in time but they will always exist because a given people or country or region will be studied from so many points of view * * * a complete regional statement of human affairs in their most complex expression is beyond the power of any single discipline—(Isaiah Bowman).

This whole concept may be summarized in the statement that a region is "An area within which the combination of environmental and demographic factors have created a homogeneity of economic and social structure"—(T. J. Woolfer).

4. Early Regionalism

The regional concept is not new, for its origins lie far back in antiquity. Indeed, regions found active expression in the national existence of ancient people. For example, Egypt was a nation growing out of, and built upon, the region of the Nile Valley which was annually inundated by river overflow. Crete formed an island region and the ancient Minoan kingdom. Babylon was built on the irrigated lowlands between the Euphrates and the Tigris Rivers. East Anglia and other early English kingdoms developed in circumscribed regions. The Ile de France and the Paris Basin are a natural region. The Greek city states were in a sense small regions.

The regional concept, though in a descriptive rather than functional form, appears in the writings of the early philosophers. Aristotle conceived of the earth as a sphere. He distinguished between the inhabited and uninhabited world, and divided the earth into zones according to temperature. He postulated a south temperate zone corresponding to the north temperate zone in which lay his own inhabited world, and believed the cold zones respectively north and south of the temperate zones to be uninhabitable. Herodotus also distinguished between inhabited and uninhabitable regions. Eratosthenes, chief librarian, at Alexandria, mapped the inhabited world with the equatorial parallel through the Straits of Gibraltar. Strabo and Ptolemy outlined tropical and temperate zones, but also with the equator too far north. Ptolemy used the term "chorography" for small areal studies and restricted geography to study of the world as a whole. Interest in chorographical studies has persisted down to the present day.

In Germany, before the modern era, the regional idea had appeared. Cluverius, who was born in 1580 at Danzig and attended the University of Leiden, traveled

widely and excelled in regional descriptions. Varenius (b. 1622) came from a small town on the Elbe near Hamburg, and studied philosophy, mathematics, and physics at the gymnasium at Hamburg. Later he became interested in geography, and reemphasized its two phases or divisions, general or universal, and special or chorograph (regional geography). Varenius' book on geography and descriptions of regions remained the standard for a hundred years. In its attention to boundaries, climate, description of regions and their inhabitants he foreshadows the scientific method of modern geography.

5. Modern Regionalism

The theory of evolution and change in contrast to the old belief in a static world was expressed by Kant in the question, "Which was there first, geography or history?" and his answer, "Geography lies at the basis of history." Darwin's theory of evolution changed the attitude toward scientific research and replaced casual with teleological interpretation in the science of physical and human geography.

Alexander Von Humboldt, through his studies of the distribution of physical phenomena and the causes of their diversity, prepared the way for regional classification. He investigated and classified differences in horizontal and vertical temperatures and correlated plant distribution with physical conditions. The isotherm, devised by him to indicate places having the same temperatures, provided a graphic method which led to several discoveries. By thus mapping temperature he saw, among other things, that isotherms do not in most cases parallel parallels of latitude, but even, extend north and south, across them; that temperatures differ on the east and west coasts of continents between latitude 40° and 60°; and that island contracts with continental climate. This paved the way for evolving climatic regions. His was the first systematic study of separate regions—those of Mexico and the Llanos of the Orinoco Basin.

About this time Carl Ritter in Germany was teaching the interdependence of man and nature, which laid a foundation for modern human and regional geography. Meanwhile, Friedrich Ratzel through the publication of his "Anthropogeographie" raised geography to the dignity of a science. He studied "human life in relation to its environment which (he believed) governs the destinies of peoples with blind brutality." Although he gave geography a new orientation and stimulus, his theory of "determination" by the environment, however, finally was forced to give way to the "possibilism" of Vidal de la Blache, which pervades all modern regional geography.

"The French regional school was the outgrowth of Vidal de la Blache's teaching and example. In his 'La France, tableau géographique' (he) sought to show that the history of France is a matter of land and place as well as of people. * * * Human adaptation of the land and to the land requires that one know the land intimately and understandingly, in precise and articulated detail. * * * He sought to show how the geographic life of the globe is geared into the life of the people"—(Bowman). So compelling was this new field of scientific research and so inspiring the leadership of Vidal de la Blache that his students, after training themselves in the requisite natural sciences, have produced numerous brilliant regional studies that pioneered the way for similar scientific research in other countries such as Britain and the United States.

The monographs "La Picardie", by Demangeon, and "La Flandre", by Blanchard; the work of Jean Brunhes on "Human Geography" are but a few from this large and noteworthy group. Regions in the light of these studies are not "precisely coincident with geological outcrops, nor defined by administrative boundaries. In an area like France, with an ancient civilization, a geographical region is defined by an 'ensemble de rapports' between man and natural milieu."—(Bowman). French geographers realized that "provincialism was markedly present (in France) and that cultural differentiation emanated from distinct centers, and that economic differences which could be correlated with culture areas also existed. Furthermore, it was finally realized that these phenomena could be correlated with topographic factors, with qualities of location and accessibility, and with the presence or absence of certain material resources."—(Renner).

De Martonne in France, a student of Vidal de la Blache, and von Richthofen and Penck in Germany produced comprehensive classifications of land forms. Hettner's *Natural Regions of Europe*, Partsch's monograph on *Central Europe*, Passarge's "Subdivisions of Africa", and the recent highly finished work of Fradman on *Süddeutschland* are some of the outstanding contributions to regional study.

A. J. Herbertson, of Oxford University, pioneered, as a result of his analysis and investigation of various types of regions, in producing a series of maps depicting the "Natural Regions of the World." Unstead, Mackinder, Mill, and Roxby, also from Britain, have followed with significant contributions in the same field. Particular mention should be made of Patrick Geddes, who fathered the regional survey movement with its synthetic study of organic relationship between city, country, and industrial area.

6. Regionalism in the United States

In the United States, concern with regions and their delineation emerged somewhat later than in Europe. The country had to be explored and settled; climatic, soil, agricultural, social, economic, and other facts about it had to be recorded, compiled, and studied. Human groupings of people and interests had to emerge into consciousness and even rub against each other before there could develop in the United States a knowledge of regional realities, and a sense of the need for delimiting and utilizing regions for administrative and other purposes.

The pioneer exploration and study by the Geological Survey leading to the early land classification maps of the West laid down a broad regional outline of the country and tended to develop some thought about the United States in regional terms. Fenneman's "Physiographic Regions" was a fundamental piece of work; Bowman's consummation of the study of pioneer regions in the United States and the world, his chapter on "Regional Geography" in "Geography in Relation to the Social Sciences"; Barrows in his presidential address on "Geography as Human Ecology"; and all three together with others, through their teaching, have brought to American geographers and other leaders a vision of what scientific regional study may contribute to the solution of human problems and to the advancement of human welfare.

The work of Marbut in classifying soils, soil areas, and parent materials of soils in his soil map of the United States is a notable contribution soon to be published, and epitomizes 50 years of study. Baker in his maps of agricultural regions; Kincer in his weather maps; Shantz, Zon, and Harshberger in vegetation maps, have contributed significantly to regional knowledge of the United States. Platt, Colby, and Jones of Chicago; Whittlesey of Harvard; McMurray, James, and Hall of Michigan; White of Western Reserve; Jones at Clark; Davis, Brown, and Hartshorne of Minnesota, are some of the geographers who by field investigations and study are adding to regional knowledge of the United States and other countries, and developing a technique of regional study.

"Geography systematically brings the distributional facts together in their regional framework. If it merely recombined data from other sciences it would be a card catalog, not a science. It goes much further than this, however, since its main purpose is regional analysis and, if possible, correlation; the identification of interrelations, the way in which the forces of environment 'hunt in packs' and produce group effects." (Bowman.) It is not interested in rainfall merely, nor in

any other environmental element by itself. It is interested rather in all those contributing factors, which, when put together to form a statement of resources and limiting conditions as complete as possible, reveal the total background for human life.

Regional planners, economists, and political scientists are directing study in the same direction, but as related to their own specific fields of research, and the correlated results of all these efforts will provide data which if used intelligently will be of immeasurable social value to the future well being of the United States. It will enable the inhabitants of this country to realize fully that which Turner tells us "are assets in their civilization as real and important as per capita wealth and industrial skill."

"Each group has a valuable and definite contribution for the sum total of working regional knowledge. The environment and its human relationships are but parts of a more significant totality. That is why a geography

that is limited to a study of human relationships to natural conditions is incomplete from the standpoint of human processes and community living. But this is no more than if one said that a purely economic study is likewise incomplete. We are dealing, always, in fragments. The universe is not reducible to the limits of one mind in a moment of time. Neither is a community, any community, a smooth working cosmos, cause and effect all neatly tied together." (Bowman.)

The regional study now being carried on by the National Resources Committee is an attempt to analyze the significance of the region and the meaning of regionalism; to consider possible regional divisions of the United States, and to examine the several administrative arrangements for making regionalism a political reality. The results are not intended to be merely ideas presented on paper, but are intended to serve as bases for accomplishing constructive service to the country, and to become vital elements in the national life.

CHAPTER XII. A PRELIMINARY EXPLORATION OF REGIONALISM

1. Regional Science

Today, the layman usually employs the word "region" as a synonym for the word "area." Thus employed, its meaning is indefinite, and it is frequently used to denote a locality, a community, a city, a county, a State, an economic area, or any other unit of territory. This has led to a vagueness of thinking which the dictionaries have done little to remedy. Indeed, for clarification, one is compelled to turn to the modern students of regional science. These men may be regarded as the scientific descendants of the early chorographers in that they have taken certain basic ideas and methods and conserved them, and at the same time have built up an elaborate and highly useful, albeit a still rather immature, science.

This has generally come to be known as "regional geography", which when examined reveals strong implications of human ecology. Thus most students of regions and regionalism have, through the very nature of their field, been recruited from the science of geography. To a lesser extent the other social sciences have also been concerned with this phenomenon because of the constant challenge which it presents. So far, only a few economists and sociologists have entered the field of chorography, and rare indeed is the worker in history or anthropology who elects to grapple with the problem of regionalism. The political scientist has quite commonly concerned himself with regions, but his interest seems to have lain not in the problem itself but in the question of what administrative use has been or can be made of some elementary form of the regional concept.

2. Opinions of Regional Scientists

As an initial step in studying the problem of regions and their role in national planning and development, an inquiry, consisting of three questions, was made to a selected group of regional scientists.⁸

⁸ Those consulted include 10 eminent regional geographers and 2 outstanding regional sociologists, as follows:

Regional geographers:

Dr. Charles Gooze (U. S. Department of Agriculture).
Dr. Richard Hartshorne (Minnesota).
Dr. Preston E. James (Michigan).
Dr. Clarence F. Jones (Clark).
Dr. Wellington D. Jones (Chicago).
Dr. John E. Orchard (Columbia).
Dr. Robert S. Platt (Chicago).
Dr. Guy-Harold Smith (Ohio).

(a) What do you conceive a region to be? Upon what basis would you delineate a region?

(b) What comments can you make regarding the size of regions, the nature of their boundaries, and their relation to State lines?

(c) What, in your opinion, is the best type of region for use in regional planning and development?

The replies to these three questions were analyzed and rearranged into readily comparable form, and are presented at the end of this chapter. The following section attempts to summarize in composite form the views of the individual consultants.

3. Summarization

(a) *The region defined.*—A region is generally considered to be an area exhibiting homogeneity in one or more of its aspects, and thus it represents an areal or spatial generalization.

(b) *Delineation.*—A region may be delineated upon a basis of many factors, and its extent varies with the factor or factors selected for generalization.

(c) *Magnitude.*—The term "region" is not commonly applied to small areas, but there seems to be some disagreement as to whether it should be applied to very large sections such as the Middle West, the South, etc., or to smaller subdivisions of these, as for instance, the Corn Belt, the Industrial Piedmont, the Chicago metropolitan area, etc.

(d) *Boundaries.*—It seems to be agreed that regional boundaries are usually indefinite, being zones rather than lines. In the majority of instances, therefore, any boundaries which may be drawn will be necessarily arbitrary. It appears, however, that it is desirable to draw boundaries, providing their arbitrary nature be admitted.

(e) *Regions for national planning.*—There is considerable diversity in opinion regarding what regional basis should underlie national planning.

The consensus of opinion seems to indicate that except for a narrow range of developmental operation, the river basin is one of the poorest types of units which might be selected.

Dr. Stephen S. Visser (Indiana).

Dr. C. Langdon White (Western Reserve).

Regional sociologists:

Dr. Roderick D. McKenzie (Michigan).

Dr. T. J. Woofter (North Carolina).

Some feel that different systems of regions should be devised for the different phases of activity involved. Others express a hope that one general regionalization can achieve the desired end. This is a problem which obviously calls for extended research.

Addendum

The replies received to the questions presented in section 2 have been rearranged into the following seven paragraphs. After each quoted opinion, the source is indicated by an index letter as follows:

- (G) Dr. Charles Gooze (U. S. Department of Agriculture).
- (H) Dr. Richard Hartshorne (Minnesota).
- (J) Dr. Preston E. James (Michigan).
- (CJ) Dr. Clarence F. Jones (Clark).
- (WJ) Dr. Wellington D. Jones (Chicago).
- (O) Dr. John E. Orchard (Columbia).
- (P) Dr. Robert S. Platt (Chicago).
- (S) Dr. Guy-Harold Smith (Ohio).
- (V) Dr. Stephen S. Visher (Indiana).
- (W) Dr. Langdon White (Western Reserve).
- (M) Dr. Roderick D. McKenzie (Michigan).
- (WO) Dr. T. J. Woofter (North Carolina).

(a) *The region defined.*—A region is an area in which the combination of environmental and demographic factors have created a homogeneity of economic and social structure (WO).

A region is an area * * * delineated on a basis of general homogeneity of land character and general homogeneity of occupancy (P).

A region is a geographical or areal generalization (J).

A region is a continuous area within which there is a considerable degree of similarity in the general (cultural and natural) landscape (H).

A region is one of the large districts or quarters into which any space or surface may be divided. A geographic region is one embracing more or less uniformity or similarity of physical conditions and economic responses within its given area (CJ).

Regions are areas within which there is insignificant homogeneity in one or several respects (WJ).

A geographic region is one within whose boundaries there is essential uniformity of physical conditions and hence in economic possibilities (W).

I consider a region to be a geographical (areal) unit in which the economic and social activities of the population are integrated around a focal economic and administrative center (M).

A geographic region is an area possessing broad unity of interest and of relationship between man's activities, actual and potential, and environmental conditions (O).

From the viewpoint of human geography, a region is an area in which some important environmental factors have approximately the same significance upon the population (V).

A region is a natural-economic unit, and is an expression of areal differentiation in the physical and cultural landscapes. (Definition inferred from general discussion) (S).

In its narrowest sense, the region connotes an area distinguished by homogeneity of conditions. Thus we may conceive of a soil region, a climatic region, a malarial region, an agricultural region, an industrial region, or a geographical region in the esoteric sense (G).

It appears to be generally believed that State boundaries have little relation to genuine regionality. Slightly more than one-third of those consulted, however, seem to feel that State lines probably should not be ignored in the delineation of planning regions.

(b) *Basis of delineation.*—There are several bases on which regions may be delineated; physiography, climate, vegetation, farming, grazing, manufacturing, trade, etc. (CJ).

The definition of a region which is submitted in a previous paragraph does not imply that similarity of land character is likely to be coextensive with similarity of occupancy (although land character in this case should be judged by criteria of significance for occupancy), but it does imply that difference in occupancy over a large area is a basis for recognizing different regions, even though land character be the same. Perhaps land character should include location with reference to other large areas, in which case it could be considered different in an area differently occupied even though site features were the same. Also functional unity is likely to be associated with this matter of location (P).

There are many kinds of regions which can be delineated, depending upon the methods used in the areal analyses. The various physical phenomena have been combined in what we have called physiographic regions. Areal differentiation based upon soil characteristics gives more minute regions, in many cases corresponding with other features of the physical landscape. Climatic regions, on the other hand, transcend those based upon minor landscape differences in elevation and exposure. Analysis of any one of the elements will yield a regional scheme which will not be exactly like the areal patterns resulting from similar investigations of other elements. A system of regions based upon the ensemble of the physical phenomena is a nice concept, but very difficult to realize. Similarly the culture cover can be resolved into its component parts and an analysis of each will reveal a fundamental regionalism, but one somewhat more dynamic than that based upon the physical phenomena (S).

From the definition given previously, an almost infinite variety of regions may be derived. They will have in common a spatial existence; they will differ in the conditions—natural, economic, or both—which set off one from another. But if we observe no sharp cleavage, do we seek first the physical factors which may outline a region or do we seek for economic statistics? Or are both facets of the same base? Until our knowledge of physical conditions is far more comprehensive, we shall have to rely primarily upon economic data. Giving full effect to various types of statistical bias is impossible. In some instances Nature has greatly facilitated the task. Abrupt and substantial changes in elevation are among the more spectacular guides to regional delineation. Economic aids, too, are available in the form of political boundaries and concomitant tariff barriers and the like (G).

This similarity (underlying regional delineation) is to be measured in terms of what is important enough to be studied—if a synthesis of all elements in the economic development than in terms of what elements are of major importance (H).

Areas may be generalized upon the basis of a large number of factors. Thus, there are climatic regions, physiographic regions, etc. In each case the regional concept is a geo-

graphic one. I am opposed to any rigid scheme of regions or any narrowly defined terminology which would limit the word "regions" to any particular kind of generalized area. But I do believe that it is necessary again and again to caution people against seeking confirmation of or objection to a generalization in terms of specific instances (J).

There are many kinds of regions; the kind used will depend upon the regionalist and his objective. The physiographer, ecologist, pedologist, engineer, etc., all work with regions, but each employs the type which best suits his particular needs. While each of these types of regions is of great value to the geographer, each is inadequate from the standpoint of use for general purposes (W).

The criteria which I would use in delimiting such a region (see preceding definition) would be largely those proposed by the United States Chamber of Commerce to the Bureau of the Census for the delineation of the 1930 metropolitan districts, namely, the retail shopping area for specialized commodities, the newspaper circulation from the dominant urban center, and the commutation area (M).

A region may be delineated by measurement of homogeneity, this homogeneity to rest upon certain selected factors. (Inferred from general discussion.) (WO).

Regions may be delineated on the basis of homogeneity in one or several selected factors. (Inference based upon several statements.) Region is defined in many different ways, depending on the definer and the purpose he has in determining regions (WJ).

An area which possesses "some unifying core" may be delineated as a region (restatement) (O).

(c) *Size of region.*—A region is an area of some thousands of square miles (P).

A region is a continuous area of medium size (anywhere from a group of a few counties up to that of a couple of States, perhaps—depending on what you want to do with it) (H).

Unit areas are of various magnitudes. My practice is to apply the term "regions" only to extensive areas; as yet, however, I have no precise definition of extensive (WJ).

The region should be of such a size that it can be administered effectively (O).

In dealing with regional units, one must recognize three different orders or scales of areal generalization (J).

In most instances, the region will have to be divided into subregions which will show less diversity of conditions (W).

We expect a much greater degree of homogeneity in the smaller subregion than in the larger region (WO).

Time rather than distance seems to be the important factor in determining the radii of certain aspects of metropolitan influence. I have found this to be a most feasible criterion for the determination of the regional unit (M).

The problem of size for the unit region is a troublesome one. There is an administrative advantage of a small number of giant regions, yet the magnitude of such areas might seriously interfere with the development of the subregional plan, and we might fail to see the trees because of the forest (G).

(d) *Regional boundaries.*—It is not so difficult to mark true geographic regions if one considers the major central portion of the given regions. The difficulty arises when one attempts to establish definite boundaries, because all the physical and economic factors do not correspond, particularly in the border zones (CJ).

The particular problem with the geographic region is the absence of sharp boundaries and the difficulty of assessing potential activities in advance of a detailed study (O).

Fundamental regionalism in the culture cover is dynamic * * * and is always changing. Boundaries are always susceptible to change * * * are difficult to determine (synthesis of several statements) (S).

It is quite absurd and illogical to seek to establish regional boundaries in detail. They must remain vague, for they are boundaries of a generalization. If, for practical reasons, one finds that he must draw boundaries, then he should do so in a frankly arbitrary manner (J).

The human-use (geographic) region is dynamic and is based upon a changing human community rather than on static natural boundaries (W).

A region may or may not conform to the boundaries of a natural unit. The base of the region becomes tenuous and changeable with variations in influence from the center (M).

Regions are convenient generalizations for grouping things which are only partly untangled and partly segregated. Therefore, any decision which makes definite divisions between the groupings is necessarily arbitrary and cuts some of the tangled strands (P).

I should like to see admissions of the difficulty of fixing regional boundaries, even in a case like the Sierra Nevada front or the Cumberland Plateau—Great Valley break. Regions have individuality; therefore, they have boundaries. These are not, however, hard, fast lines because there are always possible fluctuations in regional extent. Regional boundaries fluctuate continuously because of physical change. Regional changes of another sort also occur, viz, evolution and cultural progress in human affairs. Neither in the economic realm nor in nature is the distinction so sharp as a line on a map, but the transition zone may be narrow. We are, however, confronted with an administrative job; somehow a partitioning of jurisdiction must be made (G).

(c) *Significance of State boundaries.*—Existing administrative areas (such as States) should not be ignored (WJ).

Since planning is conceived of as a long-time program involving the whole economic and social structure, I am quite sure that the present administrative units such as States, counties, and perhaps townships, will have to be given due considerations. Federal and State constitutions, which defend State rights so jealously, will serve as barriers to the division of the Nation into broad, natural, economic regions such as the Middle West, the Palouse wheat country, or the industrial piedmont (S).

In general planning, I think the answer to the difficulties involved in the diversity of regions now in use in the administration of Federal bureaus is to be found in a broad, general regionalization of the country which will follow State lines (WO).

There seems to me to be a good reason for accepting administrative boundaries which already exist if they lie in or near regional boundary zones—accepting groups of States rather than trying to draw finer boundaries, since there isn't a basis for fine line drawing. This fact seems to me to be back of the statement that "any boundary is better than a change of boundary." After some of the strands have been cut for administrative purposes, don't change and cut others (P).

Subdivision of large planning regions, by States, might be desirable for some aspects of administration (V).

(f) *Comments on the T. V. A. type of region.*—The worst possible kind of a region would be a drainage basin, which, as W. M. Davis pointed out long ago, is seldom in any sense (except drainage) a unit (J).

The river drainage basin has the advantage of being easily and sharply bounded, but it has the much greater disadvantage of using a criterion which does not provide homogeneity in major problems. The lower courses of two river systems are likely to have more in common than the upper and lower reaches of the same system (P).

The Tennessee Valley Authority possesses a unifying core in the development of power (O).

It seems to me almost obviously absurd to take a river basin as a fundamental regional basis. Take, for example, the Mississippi Basin or the Ohio Basin; how can one find any regional similarity on such a basis (H)?

A program designed to conserve water resources and control floods might readily be applied to hydrographic regions, but for broad social planning the divide between drainage systems has little merit.

I have been fairly close to the activities of the T. V. A. but I have been unable to define or get them to define what they consider as their region. In some instances it is limited to the drainage basin, chiefly for engineering purposes, but even in this field the first town to which they sold power (Tupelo, Miss.) is not within the drainage basin. For other purposes they consider seven States as their area. This leads me to a negative hypothesis: viz, that except for engineering works, the drainage basin is the poorest type of region to deal with. This is true (1) because of the extreme irregularity of drainage basins; (2) because they are topographical belts; (3) because the upper part of one drainage basin is likely to be more similar to the upper part of its neighbor across the divide than it is to the lower part of its own watershed. I am not in favor of using the watershed for any other type of planning than engineering plans dealing with power, navigation, and flood control, because this geographic peculiarity has not been as determinant of homogeneous areas as have soil, climate, and type of original settlement (WO).

(g) *The optimum region for national planning.*—For purposes of national planning I would prefer to use regions based upon broad climatic types supplemented by contrasts in land utility (productive, marginal, and submarginal) (V).

The unit which would be acceptable for use in social or economic planning is a social or economic region. Such units might be made by generalizing problem areas. However, for practical purposes we must come down from our generalizations to specific instances, if our regional planning is to be worth anything. This is where the local inventory comes into the picture. While administrative units can be set up on the basis of the larger regional entities, the actual development of planning must be carried on in what I call "topographic detail", using that word in the dictionary sense (J).

I do not think that the question permits any single answer. Whatever single factor might be selected, may be sufficiently important to serve as the criterion, but will certainly not be so in others. In predominantly agricultural parts of the country, I should think agricultural regions might be used; in areas predominantly interested in manufacturing, no doubt manufacturing regions, etc. The criteria used in this division must be chosen in the light of known differences in climatic and physiographic conditions. It is quite possible that it might be advisable to divide portions of the map on the basis of trade areas with reference to major trade centers (H).

Planning for the Nation involves many programs projected with different intensities over the country, each of which might involve a different scheme of regionalization. Planning on a Nation-wide scale may not require a regional division of the

country so long as the measures devised to improve social conditions are designed to help all the people. Almost all legislation, however, affects different sections of the country differently. Sectionalism as conceived by Turner is a reality and must be recognized. The Middle West, an indefinitely delineated geographic region is a real region in the economic and political life of the Nation. Natural-economic regions (such as the Middle West, the Palouse Wheat Country, or the Industrial Piedmont) arrived at by proximate or strictly objective methods are probably the most satisfactory for planning purposes if all aspects of economic life are to be dealt with. Perhaps a practical solution lies in the development of only certain aspects of the planning program and designing a regional scheme most satisfactory for the administration of each. A regional reorganization of the entire social and economic system is hardly possible immediately, hence regions of various kinds, one type for each of the several planning programs, would be most satisfactory. This would require coordination in administration. Rigidity in the regional set-up may not be required, but we should recognize at once the major natural-economic regions, and since economics is dynamic we should be ready to alter the regional structure at any time (S).

As to the question of the optimum type of region for social-economic planning, I am afraid the answer will have to wait on a considerable amount of experimentation. Although it will be necessary to agree upon a general regional division combining the largest number of values for the largest number of purposes, for administration on a national scale, the type of region should probably vary with the objective in view. In general planning I think the answer is to be found in a broad regionalization of the country, within and transcending which, certain engineering planning should be done by river basins or power transmission areas (WO).

As I see the problem, the optimum region for social and economic planning should possess certain characteristics: (1) There should be some unifying core (problem or interest); (2) its area should include all the territory tributary to the core; (3) there should be an absence of serious conflicting interests within the areas; (4) the region should not be so diversified that it will place too great a burden upon the ability and training of the planners. It seems that the geographic region most nearly includes the above characteristics. Given a specific area, a capable geographer could carve out, on the basis of his experience and existing data, a planning region which would be satisfactory for all practical purposes. Much of the planning must be done on a Nation-wide scale with no attention to regions. This broader phase of planning becomes necessary where a major product with a national or international market is concerned (slight rearrangement) (O).

The optimum type of region should be large enough in area and/or population to provide only a few easily comprehended units. In setting up regions I believe that homogeneity, rather than existing functional unity, should be considered. For example, there are indeed problems common to the tributary area of Chicago and different from those of the tributary area of St. Louis, but on the whole the major differences are not those of the functional units involved, but of the different homogeneous areas which are not bounded by the functional unit boundaries. This argument against functional units as a basis for setting up planning regions is not to be taken as disputing the significance of the former, but only as against their bearing on the problem of distinguishing areas which differ in their needs. The very fact that functional areas are so important and so well known

may lead people (particularly nongeographers) to overlook this fact. * * * Agricultural regions would be good in areas where agriculture is the primary interest. In regions in which agriculture does not provide the major problems, I see no reason for confining attention to this factor. Give attention to whatever interest does provide the major problem, drawing a boundary in the zone where agriculture gives way to some other major interest (rearranged) (P).

With reference to the second question, I do not believe it is possible to get an optimum type of region for use in social and economic planning which would be equally applicable to all parts of the country. The problems of planning will vary considerably from region to region. In certain areas the production and transmission of power will be a dominant problem. The problems of planning for the spring wheat and the hard winter wheat regions would be very different from those of the highly urbanized area of southern New England. If a portion of the Nation is facing serious social and economic problems, that area ought to receive consideration for social and economic planning and only after preliminary field surveys have been made can the exact boundaries of such a region be delineated effectively (CJ).

I consider the geographic (human use) region the best type for social and economic planning. No single characteristic is used to define the regions of a country. In some regions climate is the outstanding element of the milieu; in others, topography, soils, natural vegetation, or minerals predominate. Again a certain system of agriculture may be so important as to place its stamp upon the region, as for example the Corn Belt, the Cotton Belt, the Winter Wheat Belt (W).

The movements of people to a given urban center seem to have considerable stability and to constitute the phases for regional social consciousness. I have, therefore, come to the tentative

conclusion that the retail shopping area about a metropolis represents the practical or optimum type of regional unit to use in social and economic planning (M).

I have no reasoned or even tentatively final opinion on this matter. In discussing this subject with others (not just geographers) during the last few years, I have heard several ideas expressed with which for the moment I agree: (1) Subdivision of the United States into regions for the purpose of planning might well be made in one way (or several ways) for investigation, and in another way (or ways) for putting into effect the results of such investigation. (2) Regions and their subdivisions recognized by geographers, while not to be ignored, may not be appropriate divisions of the country for the purpose at hand. (3) State boundaries are not to be ignored. (4) It may be that no one set of regions can be devised which will serve either for investigation or for subsequent effectuation of plans (WJ).

National planning involves dealing with people. Hence the region becomes a function of human activity. From one angle the natural setting appears to govern, or at least strongly affect human conduct. From another angle, man's choice of activity appears to exert the major influence in characterizing the region. With man in the picture, we have what the modern geographer designates as a geographic region. Within the extent of the region, men live by pursuing activities which display a community of interest, and which in the aggregate form an integral unit of regional mode of life. Therefore, our region (for planning) is one developed about man's economic pursuits, and man's success in utilizing regional resources may be gaged directly in fiscal terms. The gradations of success serve to indicate regional divisions. Furthermore, the measure of those gradations are the guides by which present-day government formulates its policies (G).

CHAPTER XIII. THE GEOGRAPHIC REGION

The geographic region is predicated upon the principle of geographical relationship between human activities and the natural environment. It is, therefore, ecological⁹ in character and highly complex in structure. Moreover, it is the most elaborate form of the regional concept, and probably represents the epitome in regionalism.

1. The Natural Environment

Man is everywhere surrounded by a multitude of earth-emanating or earth-contained elements, factors and forces which collectively may be termed the natural environment. If analyzed carefully, this seemingly endless variety may be reduced to some 12 elements: Climate, soil, relief features, surface waters, minerals, ground water, the ocean and its littorale,¹⁰ natural vegetation, native animal life, location, size, form.

Some of these are physical, some biological, and some intangible; some blend into the earth's surface, some are above it, and some below. All of them combine to form the natural environment or fundament, the visible portion of which is the natural landscape.¹¹ It is a matter of common observation that the natural landscape, while exhibiting general similarity over broad areas, nevertheless changes gradually in character from one part of the country to another. Two areas which are widely different in landscape character may be separated by a boundary line. Areas thus separated because of marked natural or physical differences may be called natural regions (not geographic regions, however).

2. The Cultural Environment

In every inhabited portion of the earth it may be observed that there is a cultural landscape overlying the natural. This consists of the works and constructions of man and the pattern of human settlement. It is the visible portion of the total human "occupance" or cultural environment which develops in any inhabited area. In some places the cultural landscape is tenuous and thinly spread or indeed almost absent as in the sheep-ranching districts of Wyoming; in other instances, as in the Corn Belt section of the

Middle West, it is intimately interwoven with the natural landscape; in still other localities, as for example Manhattan Island, it has become so dense as to practically obscure the natural landscape. Thus it may be observed that the cultural landscape varies markedly in general characteristics from one place to another, a circumstance which suggests that the human occupancy pattern exhibits distinct regionalism.

3. Geographic Relationship and Adjustment

There is obviously a relationship between the cultural and natural environments. This is evidenced by the fact that the cultural and natural landscapes tend to vary concomitantly; and by the fact that within the natural environment, distributed in regional patterns, lie all of those natural materials, factors, and forces, the utilizable parts of which collectively are termed natural resources, and out of which man constructs the pattern of his works and institutions.

When man comes into and settles a hitherto unoccupied area, he transforms and adapts, as far as possible, certain elements of the natural environment; in which case the activities involved are closely related to the local character of the latter. Beyond this point man must adjust himself to its assets, lacks, and liabilities.

Man adjusts himself and his activities to the natural environments in almost innumerable ways. He subdivides, clears, and plows land; he irrigates, he fills, he drains, and he fertilizes. He cuts timber, mines minerals, generates power, changes harbor lines, and develops water supplies. He builds cities and other agglomerations of human residence, erects social institutions, and develops political controls. He lays out-lines of transportation, fabricates articles, and transacts business.

These are activities which are not and can never be divorced from the resources, encouragements, and discouragements provided by the fundament. Moreover, they are interwoven with it and with one another in very complex fashion. They represent processes which are never finished, but which continue in an endless sequence of adjustment and readjustment, the record of which is the essence of history.

When analyzed this great mass of accommodations to the natural environment reduces to three types of geographic adjustment, viz, economic, social, and political.

⁹ By ecology is meant the study of forms of life and their characteristics as related to their habitat—I. e., their environing factors.

¹⁰ Not present in all areas.

¹¹ This term is used in the sense connoted by the German term "die Landschaft."

(a) *Economic adjustments*.—All those activities which are carried on for production and wealth getting may be regarded as economic adjustments to the natural environment. This is true because, in the last analysis, economic production is nothing more nor less than the transformation of resources, i. e., the capitalization of selected elements of the fundment. For example, if man base his economic life upon relations to climate, soil, and relief we may say that he has adjusted himself agriculturally to his environment. This idea may be further refined by noting that particular varieties or types of farming, such as cash, grain, dairy, horticultural, sericultural, viticultural, cotton, tobacco, general, mixed, or subsistence farming may be developed to fit into specific combinations of climatic, edaphic, and physiographic characteristics.

Similarly, if man base his economic life upon relations to natural grassland and water supplies, the adjustment may be termed pastoral; if to mineral resources, it may be described as saxicultural; if to geographic location, commercial; etc. Summarized, the major types of economic adjustments to the fundments are as follows:

(a) Agricultural—adjustment principally to climate, soil, and relief.

(b) Besticultural—adjustment to native animal life.

(c) Nemoricultural—adjustment to forest resources.

(d) Pastoral—adjustment to grassland and water resources.

(e) Saxicultural—adjustment to mineral resources.

(f) Manufactural—adjustment to sources of power and to geographic location in relation to labor, market, and raw materials derived from other types of adjustment.

(g) Commercial—adjustment to geographic location and to other environmental elements, depending upon the nature of the activities involved.

What economic adjustment men elect to make to the natural environment in any locality varies in accordance with several factors, chief of which are the cultural level of those making the adjustment, the types of adjustment with which they were familiar in their former homeland, the character of the visible resources, deliberate human choice, or even sentiment. In any case, the natural environment is a factor which must be reckoned with. The particular combination of natural factors present, and the resources available in any given area tend to favor certain economic activities and to discourage or eliminate others. Even where the connection between economic activities and the fundment are not obvious and direct, Nature may vouchsafe so low a profit to some industries that they are gradually eliminated through competition, and at the same

time it may render others so profitable that they expand into a dominant position.

Thus, there is constantly at work a selective factor, whose role is to shape the economic life of an area through its interaction with man's trial and error methods of adjusting himself to his habitat. That this selective process is * * * not rigidly operative as a control but rather as a limitation is clearly evidenced by the presence in nearly every land of submarginal farms, discrepant water uses, uneconomic mines, and unprofitable activities of many other kinds.

In spite of the many uneconomic relations present nearly everywhere, the selective process is always marked enough to produce a noticeable emphasis locally upon certain economic activities. The consequent result of this is to produce from place to place a marked regional differentiation in economic life. For example, some regions are predominantly agricultural, others pastoral, others saxicultural, still others commercial or manufactural. This regional differentiation in economic life has proceeded far enough in this country so that such terms as Corn Belt, Cotton Belt, Central Dairy Belt, New England textile region, Industrial Piedmont, are in common usage.

(b) *Social adjustments*.—During the process of accommodating himself economically to the natural environment, man concurrently adjusts himself to it socially. Social adjustments are designed to give society organization, structure, and coherence, in contrast to the economic adjustments which serve to support it. As with economic adjustments, the social fall into definite types or categories. Some of these are adjustments in density and distribution, whether sparse, medium, dense, or congested; adjustments in social habit—rural, clustered hamlet, suburban, or urban; adjustments in social structure; in social use and status of labor; in landholding and subdivision; in recreation, aesthetics, and institutions.

These too, are related to the character of the natural environment and to the supporting economic activities which in turn are rooted in it. Consequently, the social adjustments of man vary in accordance with variations in the character and resources of the fundment. Regions of general social homogeneity are, therefore, easily discerned within the United States or any other large country. Social regions do not always have the same areas or dimensions as do economic divisions, but, because there is a close relation between social and economic activities, there is a noticeable coincidence between the two patterns.

(c) *Political adjustments*.—Man also makes other adjustments to his habitat, the purposes of which are to control, administer, and protect society. These in-

clude many types of arrangements in local, provincial, and national government; and even enter into international affairs. They also include policies in taxation, in political control of land and other resources, and in regard to social and economic regulation. They include adjustments in areal arrangement for administration, boundary delineation, military offense and defense, police regulation, tariff control, and institutional organization.

Many of these political activities show definite regional aspects, because they tend to conform to variations in the character of the natural environment, or to the socio-economic environment which in turn is related to it. The degree of conformity is, however, much less than in the case of economic or social adjustments, because many political traits are arbitrarily bequeathed upon a region by a larger national organization, rather than growing directly out of the land and its people.

4. Geographic Regions

Although there are definite regional divisions in the economic, social, and political life of any people, these are but partial aspects of its total ecology. The geographer or human ecologist seeks to go one step farther, and to discover a set of regional divisions which will express as nearly as possible differentiation in the whole range of human activities. Since lines demarking the major types of economic adjustment do not coincide with those delimiting social or political adjustment, considerable compromise and reconciliation must be resorted to in order to produce a single set of regional divisions. To delineate such regions is decidedly worth while, because they probably represent the closest approximation to total regionalism which it is possible to depict. The map (see fig. 28a) by Stark and Whitteley is probably the most significant map of geographic regions yet produced for the United States.

CHAPTER XIV. FORMS AND USES OF THE REGION

Although the layman usually employs the word "region" as a synonym for "area", the preceding discussion shows that in scientific thinking certain definite qualities and properties have long been attached to it. In other words, "area is a mere abstraction, while a region is more or less tangible and may be fixed in terms of space."¹² The many attempts to fix regions in terms of space in the United States are illustrated in figures 22 to 28.

A careful analysis of all information available indicates that three general uses of the word "region" are permissible. These three uses are, however, possibly of unequal validity. They include the following: (a) areas of homogeneity or unity measured in terms of a single factor, (b) areas of unity or homogeneity measured in terms of several or many factors, and (c) areas demarked for purposes of administration or control.

1. Single-Factor Regions

It is the opinion of many regionalists that any region is postulated upon the idea of areal homogeneity or unity. (See chap. XII.) From this standpoint alone, there may be many varieties of regions depending upon the specific factors selected for measuring unity or homogeneity. Indeed, there can be as many varieties of regions as there are possible factors. For example, there may be soil regions, vegetation regions, climatic regions, population regions, agricultural regions, and so forth to great length. These are, however, homogeneous units only in one limited sense, i. e., their regionality is created by and ends in one selected datum. Moreover, they immediately cease to exist as regions when the single factor upon which they are created is removed from the focus of attention. They represent areal generalization of selected data, which is tantamount to saying that they are regions only in a partial sense. They may more properly be called, from an esoteric standpoint, not regions, but proto-regions, i. e., single-factor regions. Such units have a real value for use in dealing with specialized data. Figures 22 to 26 present 20 such single-factor regions for the United States.

2. Administrative Regions

The second form of the regional idea has developed out of the field of political and commercial administra-

tion. Railways, banks, and large business firms frequently divide their tributary area into districts or regions. This practice is particularly noteworthy in the activities of the Federal Government, wherein departments, bureaus, and special agencies are entrusted with numerous administrative functions such as the gathering of data, the collection of revenue, the procurement of supplies, management of personnel, disbursement of funds, and many others. In most instances, the volume of business has become too great to be administered directly from Washington and consequently branch offices have been established in various parts of the country. In most instances, too, territory has been allocated to each branch office so as to create a region or district. It is this very significance of the region in governmental affairs today which renders imperative that it be defined carefully. Most dictionaries give as a secondary or corollary definition of region—"an administrative district or subdivision"—thus bestowing upon the term a political meaning, at least in certain instances. In antiquity, as the word itself indicates, region carried a political connotation (Latin, *rego*—I rule). This is understandable because of the tendency of ancient kingdoms and empires to expand until they had reached more or less physically defined limits—and hence had come to embrace a natural unit of area. But modern political units have, in the main, not been determined by any such considerations and hence are not regions in any save the most artificial sense.

With the development of the modern type of nation, political units are no longer determined by race, language, culture, or natural limits of conquest, or migration. On the contrary, their areas result from a delicate balance among several factors, the result of which is often a high degree of artificiality in boundaries. Today, therefore, political units are apt to be the poorest possible expression of regionality. If this be true regarding nations, States, and Provinces, it would suggest that it be also true with respect to minor administrative divisions. An examination of more than 100 Federal administrative divisions (see chap. V) shows this indeed to be the case. They have developed because of administrative necessity, and exist because of administrative convenience, rather than by reason of any qualities inherent in the areas themselves. In other words such territorial divisions are created by extrinsic rather than intrinsic factors. Strictly speak-

¹² R. E. Hall, *Op. cit.*

ing they are regions only by designation, and must, therefore, be regarded as pseudo-regions rather than as real regional units. There is no necessity for this being the case, however, because most systems of administrative divisions could probably be designed in accordance with sound geographic principles without diminishing their administrative convenience. Indeed it would seem that it would be augmented through the achievement of greater efficiency in grouping the items or functions to be administered.

3. Composite Regions

The third form of the regional idea has developed among those who have devoted their energies to the scientific study of the regional problem per se. This has resulted in the concept of the region as an area of unity or homogeneity measured in terms of several or many factors. Such territorial units may therefore be called multi-factor or composite regions.

In studying the accompanying maps of single-factor regions as well as many other maps of regionalized data, one gradually senses that while seldom do two of them coincide, there are some areal divisions which tend to repeat themselves over and over again. This is certainly true in the physical realm, so that certain broad areal differences appear on the soil map, the vegetation map, the physical map, and many others. As long ago as 30 years, therefore, attempts were made to equate these several factors and to affect a composite division of the earth's surface into units which would express total physical differences. Out of these attempts grew the idea of natural or environmental regions (see fig. 45).

Similarly in the cultural realm, there are many social, economic, and demographic data which exhibit certain coincident regional divisions or tendencies in that direction. This in turn has suggested the idea of composite cultural regions (see fig. 46). One of the most interesting of all types of composite units is the geographic region, partly because it summarizes many cultural elements, but even more so because it attempts to integrate these with the natural factors.

It is a known fact of human ecology or geography that there is an active interrelation between the patterns of human culture and activity on the one hand, and the natural environment on the other. In no

sense is this meant to imply that one is causal to the other; rather, it is a way of saying that the structures and occupance patterns of man tend to vary with the character of the natural environment because the former are molded and adjusted to, and in a large measure derived from materials of the latter. These ecological relationships are so fundamental that they may be said to be the real determinants of regions. Moreover, they surround man with different conditions for living, different degrees of success in winning a livelihood, and different factors which challenge attention, engross interest, and set social psychology and public opinion. Thus, regional differences may be said to be also psychological realities.

One may state with some certainty, therefore, that regions are genuine entities, each of which expresses both natural and cultural differentiation from its neighbors. As such, they are definite and recognizable subnational units within the national whole. That these are not artificial differences but are well known to even the common man is evidenced by his use of such terms as the South, the Middle West, the Intermountain country, the inland empire, or the Pacific Northwest. Nor is such regional differentiation to be deplored. Rather, it may turn out to be the true expression of American life and culture. According to some it would seem to reflect American ideals, needs, and viewpoints far more adequately than does State consciousness and loyalty. One might conclude, therefore, that it should not only be conserved but augmented and utilized as a major factor in national planning and development. It is Professor Odum's belief, and one which is shared by an increasing number of persons, that "due to the bigness of the Nation and to its cultural backgrounds and motivations, as well as to technological considerations, the regional approach and analysis are fundamental to any successful permanent social planning program or procedure in the United States."¹⁴ This is not equivalent to saying that the geographic region is entirely suitable for use as a basis for regional planning by the Federal Government, even though it does seem to possess many virtues for such a purpose. This question is discussed at length in the section of the report which immediately follows.

¹⁴ Howard W. Odum, *Op. Cit.*

CHAPTER XV. REGIONS IN A PLANNED NATIONAL PROGRAM

1. The Areal Problem

Regional planning has been defined so often and so variously, that no further definition will be attempted at this time. However it be defined it is important to point out that, "the new thing in regional planning is the extension of (local) studies to larger areas, taking in not only the centers of activity, but the groups of cities, and of highways, and of natural resources of all types which go to make up a unified district, within which, nevertheless, relationships are still so close that changes in one portion of the area react on the remainder of it, and must be studied and analyzed to preserve a proper balance for the prosperity of the whole."¹⁵

"Regional planning involves the development of cities and countrysides, of industries, and natural resources, as parts of a regional whole.¹⁶ It aims to determine and to enforce by law rational, ordered policies in the use of specific tracts of land—whether for farm or forest, park or reservoir or settlement, airport or highway or railroad.¹⁷

"Actually the problems and difficulties of regional planning seem not so very different from those of city planning except in magnitude and responsibility. The principal technical difference lies in the fact that regional planning deals with the interrelations of communities rather than with the problems of individual cities.¹⁸

"The complete (social) organism requires more than a municipality to support it in all its functions. It requires a region, and the planning and development of that region constitutes a new branch of the old art of environmental planning, namely, regional planning.¹⁹

"The program of regional planning has grown out of a multitude of fresh initiatives; the activities of foresters and conservationists with forest-working plans, of municipal engineers with plans for city extensions and parkways, and finally, of a great school of regional geographers, who, under Vidal de la Blache in France, Herbertson in England, Fenneman, Smith, and others in the United States, have established the region as a definite

unit with its special individuality of geologic formation, climate, vegetation, landscape, and human culture."²⁰

The area over which the planner has need of extending his activities may be unified by one or more of several factors: A common activity, a common natural terrain, a common trade economy, and so forth, the existence of which may, of course, be employed as the immediate criterion for regional delimitation. For the regional planner, however, it has been suggested that "a region is an area unified by common economic and social purposes, large enough to permit a reasonable adjustment of necessary activities to subareas and small enough to develop a consciousness of community aims."²¹

Regions of this kind whether recognized or not, are working, ever changing realities in a dynamic modern life, not broad abstractions, or arbitrary entities. They come out of the interaction between land and people, land upon which nature has painted its own regional pattern, and people of many different traits and races. A region which may serve economic, social, and other ends will coincide closely with actualities of human and physical regionalism, for a region which will function effectively cannot be established solely by edict or enactment without reference to both human and physical delimiting factors. Failure to develop an area in harmony with the basic regional conditions present has thwarted many an enterprise or even brought poverty to the entire region in place of the prosperity which was its rightful heritage.

Within certain governmental circles it is quite common to regard the region as a conference device, a means of evoking action at a point somewhere between the local and the Federal levels. In other words it is customary to think of regionalism in terms of some convenient center or meeting place, whereat representatives of field agencies or of the States can convene and deal with some problem or set of problems without direct regard to the powers resident in Washington, D. C. Measured in these terms, the whole problem reduces to that of providing "a suitable territorial unit, intermediate between the State and National areas." Translated into terms of planning, the problem is, therefore, to provide effective decentralization of national planning activity.

¹⁵ Earle S. Draper: *Op. Cit.*, p. 6.

¹⁶ *Encyclopedia Britannica*, 14th Ed., p. 71.

¹⁷ William R. Greeley: *Regional and City Planning in New England*, in *New England's Prospect*: 1933. Amer. Geog. Soc., N. Y., 1933, p. 405.

¹⁸ *Ibid.*: page 406, quoting Russel V. Black.

¹⁹ *Ibid.*, p. 405.

²⁰ *Encyclopedia Britannica*, 14th Ed., p. 71.

²¹ H. V. Hubbard and T. K. Hubbard, *Our Cities Today and Tomorrow*, Cambridge, 1929, p. 47.

The region is undoubtedly all of this, and perhaps even more. There is something unsatisfyingly incomplete about such a concept, which is, however, not entirely revealed through a study of the administrative phases of the problem. The preceding search for the essence of regionalism would seem to indicate clearly that the region "per se" is a geographical entity as well as an administrative device, a circumstance which is in danger of being overlooked. Perhaps the whole matter turns upon the adjective suitable. It is obvious that many kinds of areas would seem to provide suitable territorial units intermediate between State and Federal areas, if administrative premises alone were employed. Indeed our whole political system of townships, counties, congressional districts, States, and Federal reserve areas seemingly represents the best that could be effected from political premises alone. Governmental structures and administrative arrangements must necessarily be constructed upon such premises; it is only when these are used as criteria for delimiting the areas to be governed, that discrepancies arise. What constitutes a suitable area would seem to be measurable largely upon geographical premises, i. e., consideration arising out of questions of human ecology (man as viewed in relation to his environment).

In other words, the problem of regionalism has, in the main, been treated as though it had no locus or at least only a very vague one, and the region has been defined purely as a possible level of government. Over against this stands the chorographical²² concept of regionalism as inherent in questions of locus, and the region as an area distinguished by definite characteristics from which problems emerge. In setting up a set of regions for a planned national development, the whole areal problem may be focussed in one question, e. g.: "Is it desired to create a larger unit than the States, or is it desired to gain a different kind of unit regardless of size?" The answer to this query depends almost wholly upon what such regions are to be used for, and this in turn upon the objectives sought.

2. The Implications of the Problem

It is one thing to define the general aim of regional planning, but it is quite another to formulate its precise objective. The preliminary attempts to do this serve to reveal that there are two very different ideas at work in the minds of planning officials.

The first of these is expressed by an eminent regional planner in the following words:²³ "The main objec-

²³ The nature of the communication was such that the writer's identity cannot be revealed.

tive of regional planning is socio-economic advancement. One of the major means of this advancement is, of course, the development of reasonable balance, self-sufficiency, and autonomy within major divisions of the country."

If this actually be the primary objective of regional planning, then the geographical answer is to provide as large and varied an areal unit as possible; one within which cities and rural areas, mines and forests, manufacturing and agricultural districts can be integrated into a provincial economy as nearly self-contained as possible. This could probably be accomplished by dividing the country into 5 or 6 major divisions, as for instance the Northwest, the Southwest, the South, the East, and the Midlands. Each of these broad sections would then be made to perform as many functions as possible, and would be dependent upon other parts of the country for only those things which it could not be made to produce.

The second idea, and one which is probably more commonly held, is that regional planning should, in the main, confine itself to dealing with the physical resources and equipment out of which socio-economic progress arises. If this be the major objective, then sectional autonomy and economic balance cease to occupy the center of attention. In their place, comes a desire to find an area within which physical resources naturally group themselves in such a way that human adjustments and maladjustments to them can be readily isolated and dealt with. To achieve such an end, the planner needs, not a large and varied area, but one as specialized as possible—one within which planning problems are segregated into a few types so as to allow for expert treatment. This should result in a division of the country into a score or less of regions, each of which would be dealt with in a manner designed to improve the ecological relations of population to the local environment and increase the economy of resource use. A region delineated under such a premise would be characterized by a monotony in problems and resources, and hence in its potential human economy. It is quite conceivable, that a region of this sort would become, through intelligent planning, less and less diversified by reason of the elimination of submarginal and marginal adjustments. Indeed, with constant attention on the part of planners, to the economic "law of comparative advantage", it is probable that a region would tend to become more specialized and less self-sufficing in its economy. The end result would be to bring about, or at least to enhance, what is popularly known as the geographical division of labor, wherein any region would tend to become in-

²² The scientific description and analysis of regions.

creasingly aware of itself through greater homogeneity of effort and more marked differentiation from neighboring regions. Through this very process, a region would become increasingly dependent upon the other segments of the national whole, with the result that national cohesion would be augmented.

3. Regions for Planning

Deferring for the moment any consideration of regions for purposes of construction and operation, the question of regions for planning may be examined first. While no single answer can be returned at this time, the general problem may be weighed in the light of the major factors which enter into any regional picture and with which planning must deal. These include the whole realm of natural resources and the related processes of adapting them to meet human needs, i. e., economic production. It would also seem to include many of the distributional and institutional aspects of the human resources, the commercial structure, the transportational patterns, and the political arrangements whereby the life of the region is integrated, and the relations which the area has with other regions. If any one of these elements be dealt with as an isolated factor, the area involved is definitely demarcated and usually rather small. In planning, however, one is compelled to deal with several or many interrelated factors, with a result that the area to be treated becomes much larger, and much vaguer in outline. Nevertheless it seems worth while to search for a unit of area less than the whole Nation which will allow of planning for a combination of all or most of those functions which are significant.

In general, it may be stated that any such region should exhibit the following physical characteristics:

(a) Its territory should be as contiguous and compact in outline as possible, rather than fragmented.

(b) It should possess the maximum degree of homogeneity, i. e., it should exhibit marked homogeneity of elements and characteristics in its central core, which homogeneity becomes progressively diluted toward the periphery. The boundaries themselves are in most instances transition zones rather than sharp lines.

(c) It should possess unity, organic interrelationship, and cohesion, i. e., it should have unity in environmental characteristics, to such an extent that it is or tends to be overlaid by a dominant type of cultural pattern embodying the works of man.

(d) It should include all territory containing a major combination of resources, i. e., it should be an economic-natural unit in general terms.

(e) It should include whole problem areas and not partial areas.

(f) It should include as nearly as possible a total areal pattern of culture and works and should not cut across such patterns.

(g) It should be so delineated as to conform to existing regional consciousness and sentiments.

(h) It should possess regional identity. No citizen of Iowa would, for example, readily identify himself with a region consisting of a combination of States such as Louisiana, Oklahoma, Iowa, and Missouri; no Californian ever boasted of living within the Twelfth Federal Reserve District; no Washingtonian of being a resident of the Fourth Procurement Zone. On the other hand, people do already identify themselves with certain broad sections or regions of the country such as the South, or the Middle West. Even where they do not, certain divisions can be made so as to delineate areas of such uniqueness that such identifications and areal consciousness will be wellnigh impelling.

(i) Lastly, it should be of fairly large size. Areas, ranging from localities on up through districts, subregions, and regions, all manifest the quality of homogeneity. This quality becomes less intense as the areal unit is increased. The term "region" seems to apply to the largest area within which there is marked unity in physical and cultural elements. Any area larger than this, loses its distinctive character in a welter of unlike traits. By the same token, smaller areal units lack true regional character because they are but fractional parts of a related whole.

To the planner, the region should be a convenient device to keep planning problems and functions within manageable dimensions. They are elements, therefore, whose demarcation gets something isolated so that a unified consideration may be accorded them. All pointing toward this end, there have been suggested five possible methods for the delineation of planning regions, as follows: (a) Regions based upon metropolitan spheres of influence; (b) regions based upon administrative and locational convenience; (c) regions based upon group-of-States arrangements; (d) regions based upon single-function areas; and (e) regions based upon composite planning problems.

(a) *Regions based upon metropolitan influence.*—The modern big city is one of the most obvious and impelling things in the national pattern. To many, therefore, it has seemed logical to regard cities as the major desiderata in regional planning. In fact, regional planning has hitherto been applied in this country "almost exclusively to certain great metropolitan districts"²⁴ and the term "region" to most planning officials has come to mean a metropolitan area. Indeed,

²⁴ Thomas Adams: *Regional Planning in the United States*, in American Civic Association, Inc., ser. 4, no. 1, Apr. 1929, pp. 5-12.

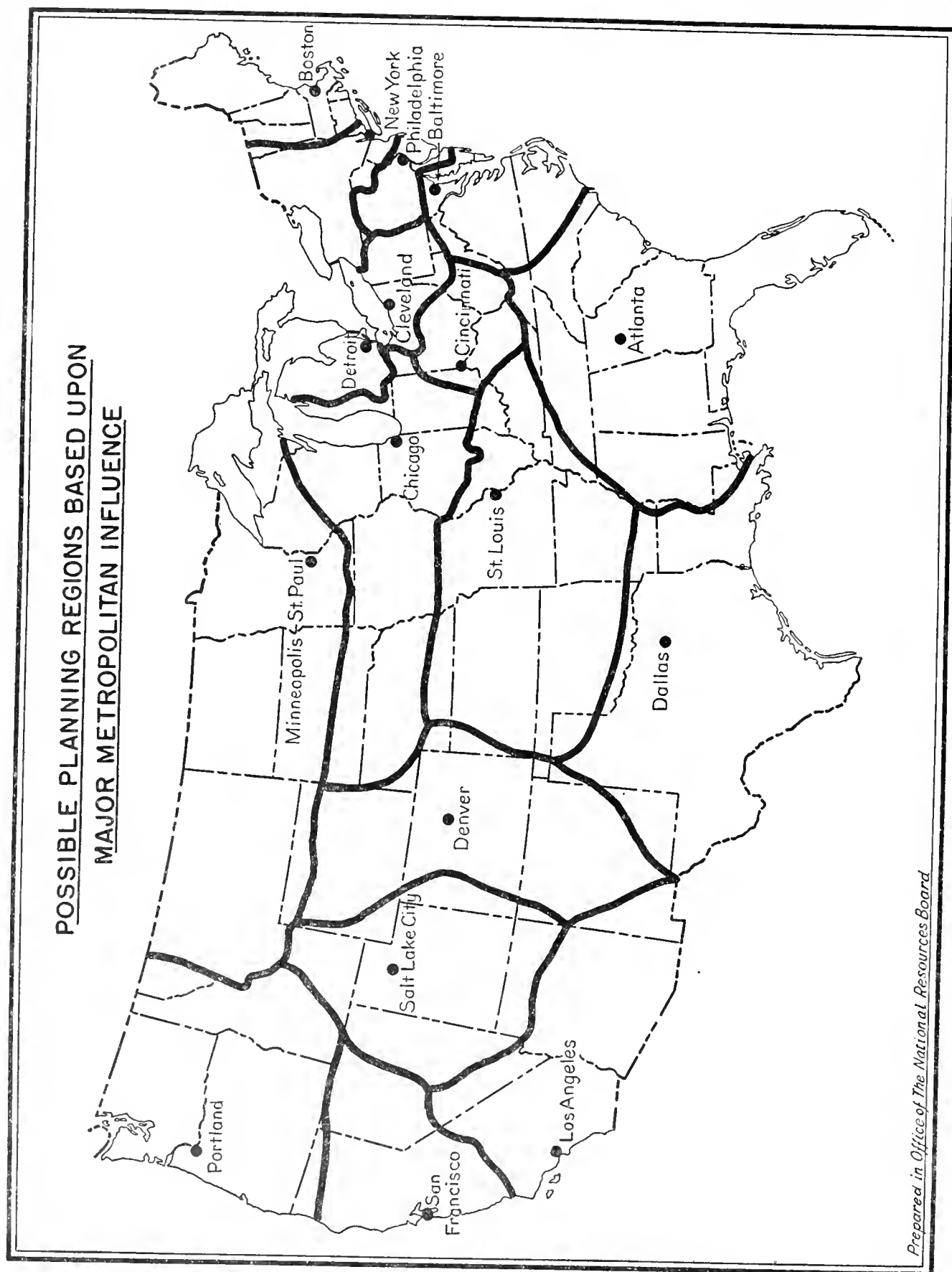


FIGURE 16.

a region has even been defined as "an area included within commutation and easy 1-day shopping distance of the central cities, or city."²⁵ This concept is too narrow. Planning is desperately needed today for many a rural area not centering about a metropolis and is no less needed for tracts far wider than those that lie within a day's shopping distance from a city."²⁶

A city, however, just as any other socio-economic phenomenon, can be regarded from many angles. If it be approached geographically, then the city is a regional unit, albeit the smallest and most complex one. "But it is not an isolated unit. It is retroactive, tending; that is, more and more to create its own region. It, plus its external relations, some students of government think, may even be the future basis of regional administration, rather than an artificial creation, such as an American State."²⁷ The basic idea in this connection is that large areas are unified and given regionality by the influence of urban metropoli. Professor McKenzie asserts that "geographically the metropolitan region extends as far as the city exerts a dominating influence." He qualifies this, however, by saying that "the modern metropolitan community obtains its unity through territorial differentiation of specialized functions, rather than through mass participation in centrally located institutions." In other words, metropolitan influence is manifested only in a few specialized functions, whereas, for other and often more significant functions, smaller local centers may exert a far more potent influence; moreover, for many functions, the metropolis would seem to exert a little or no discoverable influence at all. McKenzie goes on to say: "The economic unity of the metropolitan region is based upon a pattern of economic relations characterized by territorial differentiation and specialization of parts which are functionally integrated in a sensitive balance of space and time relations."²⁸ This is partially valid, but it fails to consider the fact that metropoli are geographically of two kinds—regional foci and supraregional creations. In other words, some large cities are created by the regions which contain them and for which they are in many respects centers of integration, but many other cities are not products of regional forces. These instead are created by larger factors in the total national economy. Most of the million-cities are probably of this latter type. To identify regions with such cities, therefore, is to create a regionalism of somewhat dubious validity. Many of the smaller cities do exhibit a certain areal control, but their application as regional criteria results in a great number of divisions, whose use could

only result in planning upon a district rather than a real regional scale. Probably the confusion in thinking on the regionality of metropolitan spheres of influence arises out of a failure to realize that "a single city or metropolitan area is but a part of a larger environment."²⁹ In short, it is an element in the total regional picture and not its fundamental outline.

Maps showing the 96 metropolitan areas based upon the 1930 census and the 43 areas of newspaper circulation from large cities were examined. Using these criteria, larger metropolitan areas were constructed by grouping the smaller units together and assigning them to certain major cities. This yields a map of 17 areas which conceivably might be used for regional planning purposes. (See fig. 16.) Aside from the somewhat questionable assumption underlying the delineation of regions on this basis, there is another aspect of the matter which should be considered.

To construct regions which would adhere to cities rather than to the broader aspects of resources, economic patterns and regional interests is to place the emphasis upon one factor rather than the total region. Upon such a basis regional planning tends to become an expanded form of city planning. On the other hand, it is by no means certain that planning has not arisen at least in part out of the necessity of preserving local rural culture and resources against chaotic economic and social forces emanating from the city. Even were cities themselves carefully planned, this would still be true, for the city is an organism whose very nature places its nutritive processes above larger regional considerations.

(b) *Regions based upon administrative convenience.*—A second proposal would create a set of regions based upon the selection of perhaps 10 to 20 cities which would serve as subnational centers, to each of which a unit of territory would be arbitrarily assigned. These centers would be chosen on the basis of so-called administrative and planning convenience. When analyzed this would appear to be actually locational convenience, for it would involve: First, accessibility by lines of railway, highway, and air travel; and second, the proximity to State institutions and to Federal field offices. Some attention would also be paid to obtaining a fairly even distribution of planning centers over the national territory. The location of Federal administrative field offices and that of urban metropoli would probably afford the principal data for the selection of planning centers on the basis outlined above.

This plan would obviously not create regions in the chorographic sense, but would produce areas designated as regions resembling those now used by many of the Federal departments and bureaus (see figs. 30

²⁵ H. V. Hubbard and T. K. Hubbard: *Op. Cit.*, p. 46.

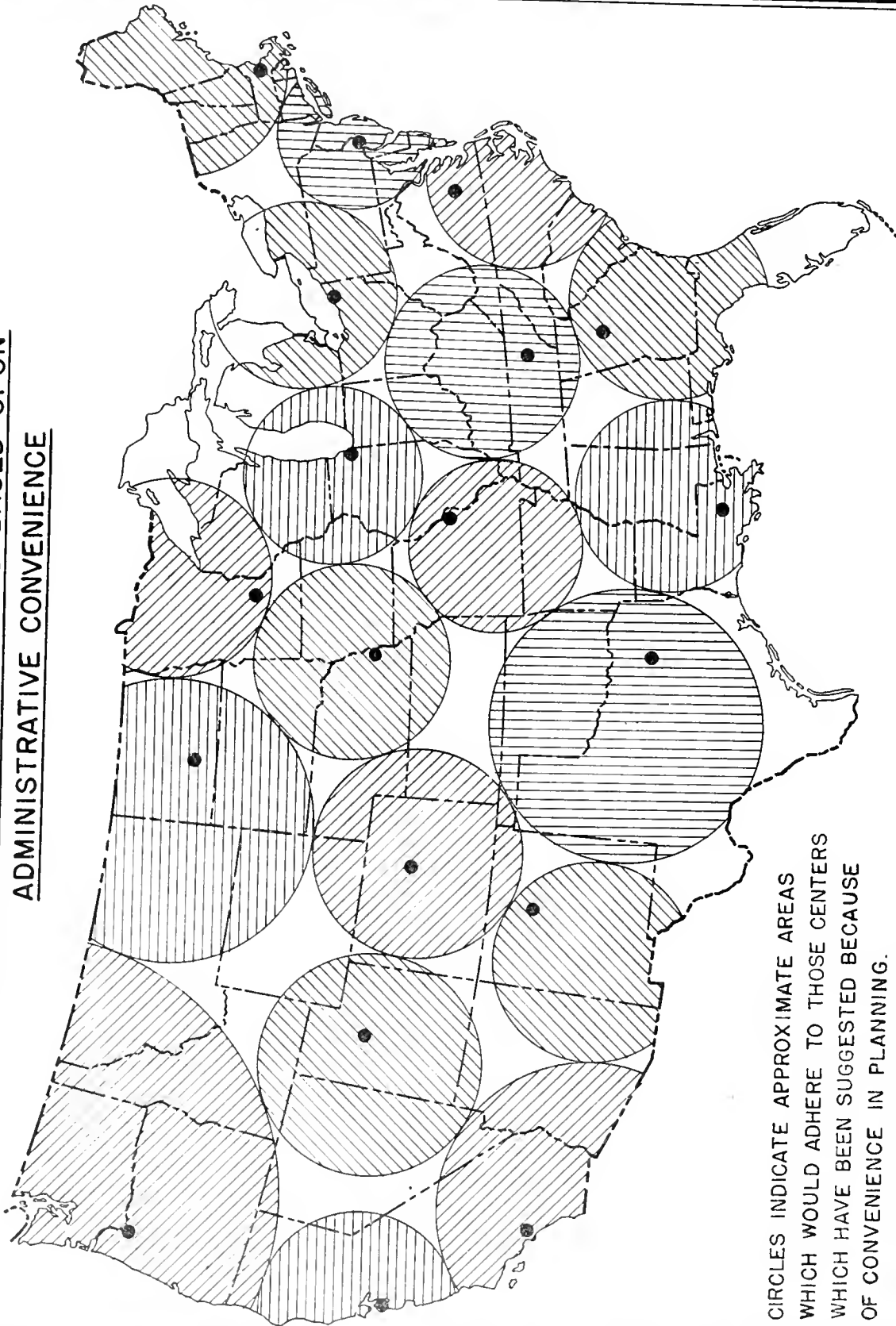
²⁶ William R. Greeley: *Op. Cit.*, pp. 405-406.

²⁷ M. T. Bingham: *A Method of Approach to Urban Geography*, *Geographical Journal*, vol. 28, no. 4, p. 285.

²⁸ R. D. McKenzie: *The Metropolitan Community*, 1933.

²⁹ J. E. Pomfret: *Op. Cit.*, p. 5.

POSSIBLE PLANNING REGIONS BASED UPON
ADMINISTRATIVE CONVENIENCE



CIRCLES INDICATE APPROXIMATE AREAS
WHICH WOULD ADHERE TO THOSE CENTERS
WHICH HAVE BEEN SUGGESTED BECAUSE
OF CONVENIENCE IN PLANNING.

Prepared in Office of The National Resources Board

FIGURE 17.

to 47), wherein the problem of regions has been decided upon the basis of considerations of departmental procedure, whilst the fundamental composite factors which create regionality have been ignored. To determine what particular cities shall be the centers of regional planning, in terms of the present location of so-called "regional offices of the Government" (which themselves have been selected upon a questionable basis) is to bring about an accumulation of departure from real regionality. Moreover, to weight the selection of planning centers in these terms, would make it difficult to approach any regional problem directly, and instead would compel a roundabout approach through consideration of already established Federal field offices. Certainly it is logical to suppose that the areal basis of planning should itself be planned according to sound geographic principles as these relate to the problems to be faced, and thus really add to the convenience of administration and other procedure.

Likewise to select centers for regional planning in terms of locational convenience is actually to weight the result heavily in terms of metropolitan influence. This is true because the transport and communication facilities of a place are usually commensurate with the size of its population. Consequently, the most convenient centers for planning would be the larger cities. The weakness of this lies in the fact that areas naturally tributary to such cities are not regions in the real sense of the word. Some regions contain 2, or 3, or even more large conveniently located cities within their territory. If only one of these were to be selected as a planning center it would make little difference which were chosen, but undoubtedly 2 or 3 cities would be selected. To each of these would be attached a sphere of operations, the limits of which would be determined roughly by the balance between metropolitan influence emanating from the several centers. In the end, these metropolis-dominated fragments would assume regional status, and totally eclipse the more fundamental regional pattern underlying them.

In a few regions, there are no large conveniently located cities to serve as nuclei of planning areas. It is commonly overlooked that some regions do not produce cities, because city-creating factors are absent. Nevertheless, their regionality is unquestionable, and their need for recognition as planning units is as real as the most highly urbanized areas. For example, the Great Lakes forest and cut-over region contains only one city, Duluth; and this is neither very large nor conveniently accessible from other parts of the United States. In spite of this, the area is a clear-cut region which presents a unique set of problems to the planner. Similarly, the hill region of Ozarkia and the southern Appalachians, and the forest and recreational region of northern New England are wholly devoid of large

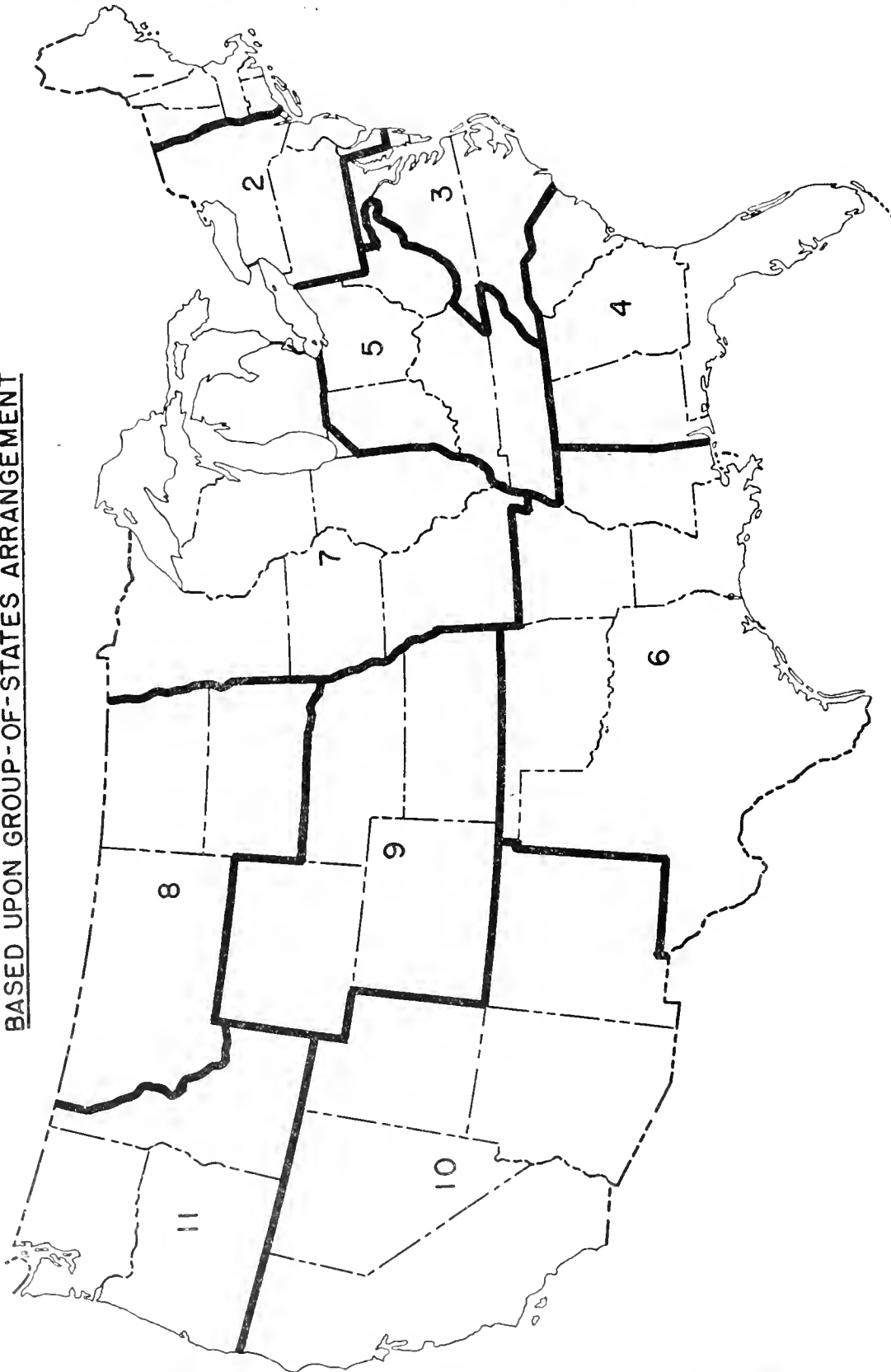
cities. Any division of the country on the basis of administrative convenience could not therefore adequately express these areas as regional entities. Rather, it would attach each of them as a whole or in several unrelated parts to the closest city or cities.

The more carefully one scrutinizes what is commonly called administrative convenience as a regional premise, the more it would seem that there is present in the minds of its proponents an implicit tendency to define a region in terms of metropolitan influence. An attempt to improve this method has been made by suggesting that after these centers have been selected, their tributary areas be not defined, but left as vague spheres of planning jurisdiction or influence. The supposition made in this case is that to each center, certain functional areas will be attached in the course of planning operations. In the end a composite region will have emerged and come to adhere to each center. A map depicting a set of such regions is shown in figure 17. A doubt is cast upon the validity of such a supposition, by observing European experience along this line, notably in France where contrary to expectation, regions have not emerged under influences generated from selected centers. Indeed, it has been impossible to proceed even so far as to officially select a set of regional centers, because at each attempt the whole procedure becomes bogged down in the rival claims among cities, for selection, and the basic question of regionality becomes thoroughly obscured.

Despite the weaknesses in delineating planning regions upon this premise there are many regionalists who today are thinking in such terms. A program based upon regions of this kind has the advantage of being flexible, because it allows a pragmatic approach to planning problems without reference to deep-seated regional realities of a physical or socio-economic character—a consideration which is apt to be appealing in the midst of a large-scale program demanding quick results. When once regional planning centers were set up, problem areas, functional areas needing treatment, survey activities, and construction projects could be quickly allotted to this center or that, territorial jurisdiction could be thrown in this direction or that as would best meet the exigencies of the current situation. In the end, a region would emerge and take form about each center through the synthesizing of projects and problems to be treated.

"Regions derived by synthesis would probably be both ephemeral and of limited value because their basis would be fragmentary and more or less unrelated truths. While this method has a certain attractive quality of realism, it is possible that this is more superficial than fundamental. Even in this project-conscious day, the known and described problem areas constitute only a

NATIONAL RESOURCES BOARD PLANNING DISTRICTS
BASED UPON GROUP-OF-STATES ARRANGEMENT



Prepared in Office of The National Resources Board

FIGURE 18.

small and perhaps inferior part of the countless possible adjustments and readjustments within a region.

"Regions can, on the other hand, be derived by the expert analysis of fundamental natural and cultural characteristics, in order to determine the areas of similar resources, cultures, and handicaps. Regions of this type would inevitably possess similar planning problems. It seems likely that the geographic region constitutes the most valid example of this latter type of areal unit, with some modification, perhaps, to meet the needs of planning."³⁰

(c) *Group-of-States regions*.—There are some who are opposed to the delineation of planning regions on the basis of either functional considerations or of geographical principles. Their chief objection is not directed against the scientific soundness of such schemes, but arises from a feeling that State lines must be the ultimate consideration underlying the drawing of regional boundaries. Such "regions", therefore must be in the last analysis, merely loose combinations or groups of States. It may be asserted that in the creation of regions of this type, there are no possible combinations of States which will serve ultimate aims, although they will serve certain designated proximate aims with entire adequacy. For example, Missouri, Illinois, and Indiana might be grouped with their northern neighbors to form a north-central region. This would result from considering the characteristics of the northern portions of these three States. But if attention be focused upon the characteristics of the southern parts of Missouri, Illinois, and Indiana, one can make just as valid a claim for grouping these States with their neighbors on the south. There is no known or possible grouping of States which would provide for Texas, which lies partly on the Great Plains and partly in the Cotton Belt, and is both western and southern in its characteristics. The same may be said regarding Missouri, of which, part is southern and part is midwestern; part is forest and part is prairie; part is plain and part is Ozark; part is Corn Belt and part is general farming.

No regions formed by interstate combination can satisfactorily allocate those States which lie athwart the hundredth meridian. Their eastern humid portions are fundamental parts of the great American midland; their semiarid western portions are inextricably woven into the entirely different picture which obtains on the Great Plains. For purposes of dealing with certain problems, they might participate in regional planning efforts in the former area; for other purposes and functions they might be represented at the regional

planning commission in the latter. In other words, they would of necessity belong to both, but would be ultimately identified with neither. Such multiple participation of States in several group-of-State regions does not seem to be a very satisfactory solution, for this must serve in the end to destroy all identity of regions as such, and among other things to defeat most of the psychological advantage attaching to regional planning. This should be encouraged rather than defeated, because it is a barrier against the rising tide of sentiment for State's rights on one hand, and the growth of an omnivorous Federal power on the other.

Social and economic patterns extend over political lines with impunity and cannot be made to conform to State or county boundaries. Since such boundaries in the United States are not trade barriers, the special significance of an area does not stop at State or county lines or pertain to any grouping of such units. In spite of the common recognition of this, most of the governmental agencies which perform planning functions base their regions upon this premise. The National Resources Committee itself makes use of a group-of-States device for certain phases of its program (see fig. 36). Moreover, the two unofficial interstate planning organizations now in existence, viz, New England and the Pacific Northwest, are units of this kind.

"The larger group-of-States regions may in certain respects be better than single States, but since the regional boundaries are composed of State lines, it is obvious that many of the old inadequacies are perpetuated. Apparently, States or groups of States are not particularly suited to function as planning regions."³¹

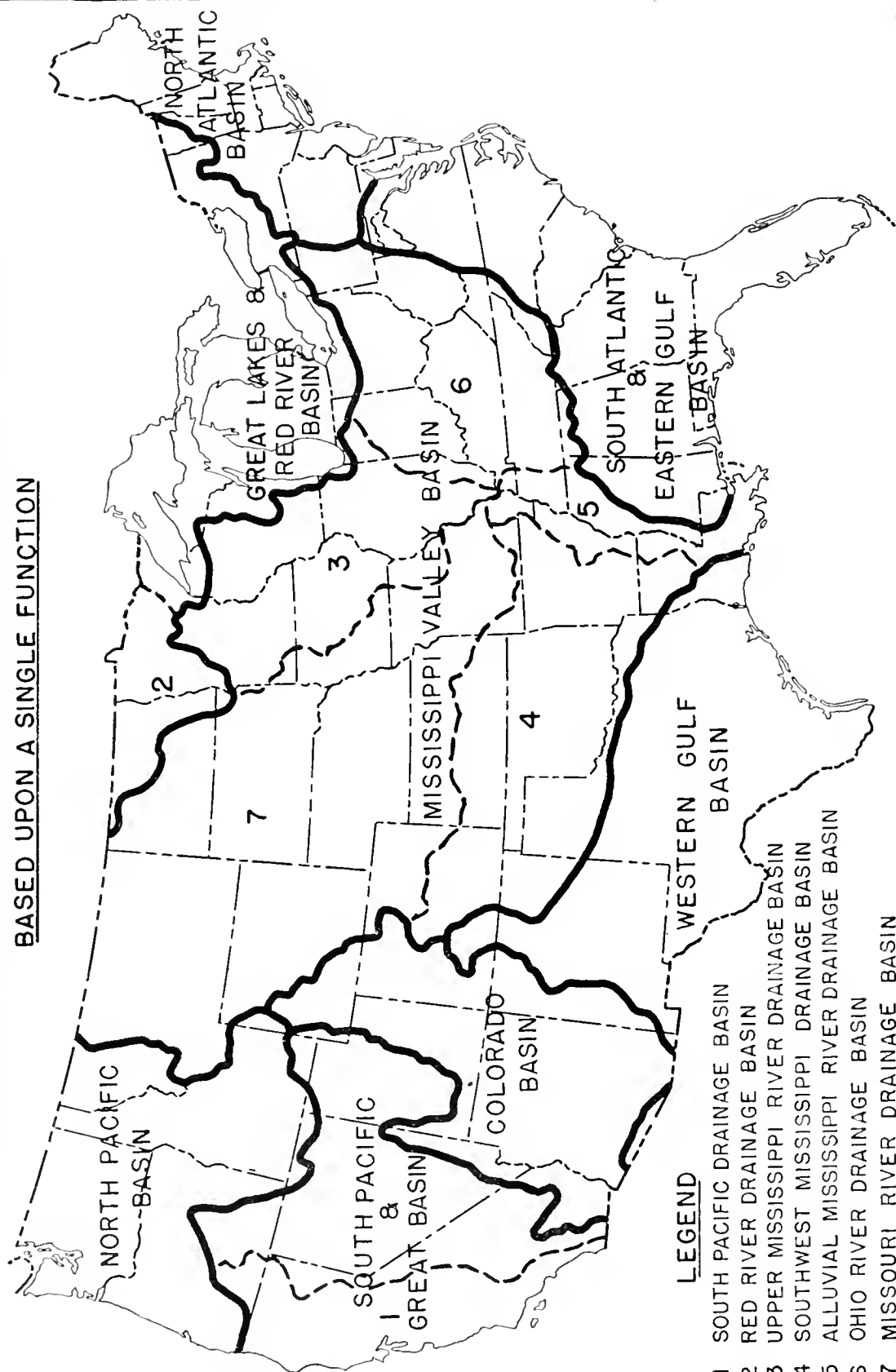
(d) *Regions based upon single functions*.—A fourth proposal is to establish various sets of regions, each of which would deal with one function only. This suggestion has genuine validity because the territories involved in planning for water, minerals, forest use, recreation, agricultural production, and other phases of economic life rarely coincide. The result of such a scheme would be to divide the Nation into perhaps 12 agricultural regions, 11 water regions, 6 transportation regions, 96 metropolitan regions, and so forth. Few of these "protoregions" or single-function areas would be coincident or coterminous. This, of course, would be entirely acceptable if planning were to emanate entirely from the National Capital. This latter is, however, neither to be foreseen nor desired. To work such a scheme as the basis of regional planning would not only result in conflict and duplication but would create an enormous problem in coordination. An example of one type of single functional division is provided by figure 19.

³⁰ A Preliminary Determination of Planning Regions, memorandum submitted to the Committee on Regional Planning, by Dr. Willis H. Miller, of Los Angeles Junior College.

³¹ Willis H. Miller. *Ibid.*

NATIONAL RESOURCES BOARD WATER RESOURCES REGIONS

BASED UPON A SINGLE FUNCTION



LEGEND

- 1 SOUTH PACIFIC DRAINAGE BASIN
- 2 RED RIVER DRAINAGE BASIN
- 3 UPPER MISSISSIPPI RIVER DRAINAGE BASIN
- 4 SOUTHWEST MISSISSIPPI DRAINAGE BASIN
- 5 ALLUVIAL MISSISSIPPI RIVER DRAINAGE BASIN
- 6 OHIO RIVER DRAINAGE BASIN
- 7 MISSOURI RIVER DRAINAGE BASIN

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FIGURE 19.

(e) *Regions based upon composite problems.*—A fifth possible method is to delineate a set of regions based upon the clustering of as many planning elements or functions as possible. At the outset it may be recalled that planning problems derive primarily from natural resources, economic activities, and social traits of the population. The first step toward discovering what composite regional divisions could be made, consisted in gathering two sets of data—one in the environmental realm; the other in the socioeconomic or cultural realm.

In the former, maps showing climate, soil, relief, drainage, natural vegetation, fauna, and principal mineral resources were collected. On these maps the data were regionalized into fairly broad generalized areas. In actuality such surface units are single-factor areas or protoregions rather than real regions, because they represent geographical generalizations upon the basis of a single selected factor. (See figs. 22 to 23.)

Similarly, on the cultural side, maps of population density, metropolitan influence, economic adjustments (manufactural, agricultural, and pastoral), wholesale and retail trading areas, farm income, distribution of public relief, and voting habits of the population were assembled. These maps present their data in regionalized fashion comparable to those depicting the physical elements. (See figs. 24 to 26.)

When these protoregional maps are collated and compared a certain fundamental areal differentiation over the country becomes evident. The boundary coincidence is not high, but there is a marked coincidence of central areas, while certain combinations of areal units occur over and over again. This correlation of elements is marked enough to more than suggest that there is a distinct set of forces making for total regionality in this country. This is further supported by the accompanying maps which represent attempts to combine certain elements within both the environmental realm and the cultural realm so as to reveal certain composite regional pictures. Some of these are natural land areas, natural regions, land-use problem regions, geographic regions, and regions of socioeconomic homogeneity. (See figs. 27 to 28.)

A map of multifactor planning regions has accordingly been prepared, upon which boundaries have been drawn in accordance with this principle except to the extent that two added factors were interjected as weightings. Particular weight was assigned to the factor of land-use problems because of its preeminent significance in underlying any possible planning program. Some consideration was also paid to the insistence of that general sectional consciousness which is apparent in general thinking and reference. (See fig. 20.)

The map as finally prepared contains 12 regions, each designated by a name which has general usage in common parlance. As nearly as possible, the division shown in figure 20 represents an effort to find maximum homogeneity of social, economic, and environmental elements. As such, they will be grasped and identified by the average citizen. They are not to be thought of as self-sufficient units economically. In most instances they are actually the very opposite; they represent geographical groupings of specialized economic and population functions, and, therefore, they are as mutually interdependent as any set of regions which might be delineated. The problems with which planning must deal are known to adhere closely to the social, economic, and environmental factors which go to make up the general geographic character of the earth's surface. The above regional units, since they are based upon these factors, might therefore be regarded as one of the best possible segregations of composite planning problems.

It is recognizably difficult to lay down a set of regions equally valid for all elements of planning if such regions be rigidly bounded, and yet, in order to achieve anything like definiteness, the regions employed must possess boundaries for purposes of ready identification and general allocation of jurisdiction. It is precisely at this point that it becomes desirable to introduce a new element into the regional concept, viz, the elastic boundary. For purposes of enlisting public sentiment and support, for identifying the region, and for dealing with the majority of problems, the boundaries may be indicated as shown on the map (fig. 20). Certain problems, however, are known to cut across these boundaries. In the majority of instances, as in raw material-manufactural relations, these problems are not actually regional in character; they are interregional and national. As such, their solution hinges upon two processes—interregional co-operation and coordination at the hands of a national planning agency.

Certain other functions are definitely regional, however, and still they do not conform to the boundaries as drawn. Notable among these are the problems of water resources. For such functions, regional boundaries may be regarded as elastic, to be stretched out to include the entire area covered by any problem whose treatment is vital to the economic well-being of a given region. In cases where disputes between two regions arise as to which shall have planning jurisdiction, the national planning agency would presumably allocate the problem to one or the other.

The elastic boundary, however, does not mean an indeterminate, extensible, or compromise boundary.

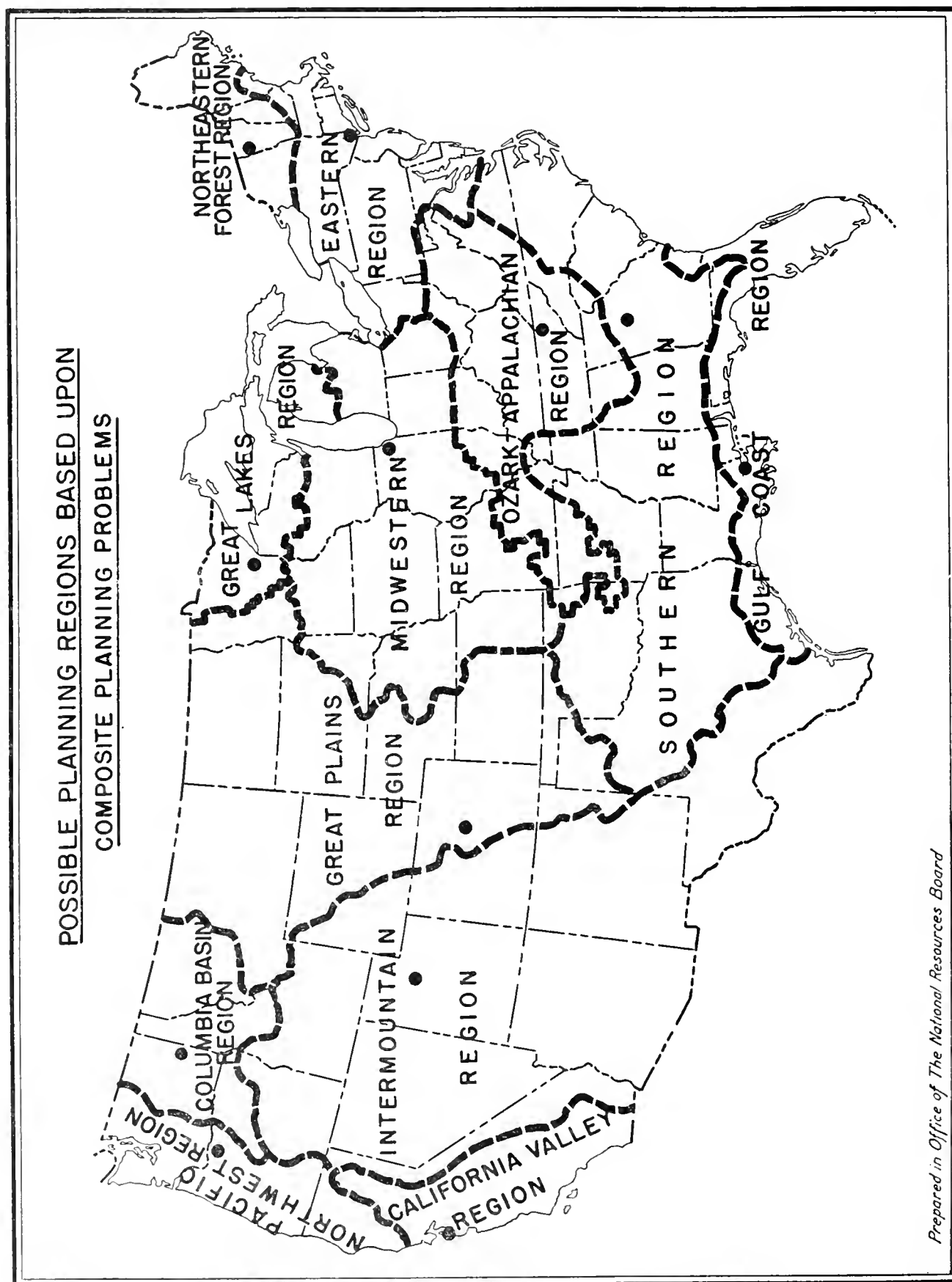


FIGURE 20.

Visualize, if you will, a region whose area, boundaries, and center, have been determined by careful scientific analysis; as such it is the optimum expression of regionality possible in view of the counter claims of adjacent regions. It is given definite size and shape by its general location in the national pattern but in the planning of any given function the boundaries may be stretched out to include any area immediately necessary to formulate a whole plan. For other functions, the boundary may be withdrawn or contracted in order to allocate a certain functional area to an adjoining region. As soon as the stresses of these particular functions are relaxed, the boundaries regain their normal shape where they continue to serve in delimiting general sectional interests.

The footnote paragraphs below present, in summary fashion, the major characteristics of the 12 regions delineated upon this premise.³² Some of the

Great Lakes region.—This is a region characterized by a major forest-land problem. It is generally of low value for agriculture, its manufactures are few and specialized, and its economic pattern is based upon extractive industries. Dominant elements in the population are Scandinavian, Finnish, and French Canadian. Planning problems center about forestry, wild game, minerals, recreation, submarginal farm land, and poor patterns of settlement and social institutions.

Pacific Northwest region.—This is a clear-cut example of a distinct planning region as well as a unique climatic unit. Its major resources are forest, fisheries, waterpower, recreational beauties, harbors, and small bits of fertile deltaic land. There are several critical problems present, as, for example, forest management, improvement of recreational facilities, improvement of inland and coastal waterways, elimination of much foothill settlement, land-clearing programs, and water-power development. Urban planning and the search for potential industries are also significant questions.

Columbia Basin region.—This is commonly known as the "Inland empire", the natural capital of which is Spokane. Although this area is often thought of as associated with the northwest region, the two units are as nearly unlike as two adjacent portions of the earth's surface can be. While there is a rim of forest about the basin, the central area varies from good agricultural land in the east to bunch grass and sage brush in the west. General unity is given to the region by its watershed relations, its transportation pattern, an almost complete mountain periphery, and by the Columbia River itself. Major planning problems are improvement of the river channel, irrigation and resettlement, withdrawal of much submarginal dry-farming land, large-scale erosion control on the rolling wheat lands, development of mineral resources, and of hydroelectric manufacturing industries.

Great Plains region.—This is a commonly recognized sectional unit, largely by reason of its peculiarities of topography, climate, and pattern of settlement. It includes the great American Wheat Belt, together with a few areas of specialized irrigation agriculture and much livestock ranching. On the west, the region includes the watersheds of all the major streams of the Great Plains. These latter are of little, if any, use for navigation, of some use for power, but of great use for irrigation. On the east, the region gives way to the Corn Belt, and on the south, to the Cotton Belt. Critical planning problems are retirement of submarginal land, adjustment to recurrent droughts, wheat-production planning, enlargement of farm holdings, the introduction of new agricultural crops, and improvement in communication and settlement patterns.

Intermountain region.—This is an elevated, generally arid section with a cover of sage brush and mesquite grass, broken here and there by elevated forest tracts. Land-planning problems center around range use and control, wise development or irrigation farming, and elimination of scattered areas of submarginal farm settlement. Water problems are centered in the valleys of the Colorado, the Rio Grande, and the Snake Rivers, and in the Utah oasis. Mineral-use planning and the extension of tourist highways are important problems.

California valley region.—This unit lies wholly within California, but does not include the entire State. This is the zone of "Mediterranean" agriculture with its emphasis upon tree crops, vine, and winter vege-

considerations underlying their delineation are also outlined.

4. Regions for Construction and Development

Regional planning is not an end in itself; rather it is an instrument for arranging to do certain things more successfully. It is a basis for action. It is a means for deriving sensible policies and programs, and it should be an aid in determining what kinds of devices are most suited to carrying out those policies and programs.

So far in this report the discussion of regions has centered around the question of areal units suitable for planning purposes, but the question may also be raised regarding areas within which those plans will be carried out. Briefly stated, "What areas are suitable for planned construction, development, improvement, and remedial action?" This is an important

tables. Major planning problems of the region include water development in the great valley and water supply for the southern lowland, reduction of capitalization on many irrigated lands, and the retirement of submarginal farm land. Most of the foothill areas need careful zoning. Two great metropolitan districts present critical problems in urban planning. Over all stands the very great problem of extending and rationalizing the facilities for commercialized recreation.

Southern region.—This area roughly coincides with the Cotton Belt, although within it are minor areas, specializing in the production of tobacco, fruits, and other crops. The great unifying factors of the region are the predominance of a plantation agriculture based upon subtropical staples, the presence of a large Negro population, and a marked anity in social and political attitudes. Critical problems present are: Poor land-holding status, crop mortgage landlord and store credit arrangements, and critical and wide-spread erosion of agricultural land. The problem of the lower Mississippi River is one of the most challenging on the American continent. Forest planning on the pine lands and the development of manufacturing on the piedmont are additional problems of serious import.

Ozark-Appalachian region.—The southern highland problem is in part physical, but in even larger part human and economic. This is probably one of the most distinct geographic regions in the world. It is characterized by a dominance of general and self-sufficing agriculture, with commercial specialization in only a few areas, by a lower order of industrialization, and a general paucity of large cities. There is present a tremendous forest-land problem, a menacing erosion situation, and an appalling problem in human economy. Water problems include navigation on the Ohio, the Cumberland, and the Tennessee, wide-spread power development, and provision for distributing it both within and without the region. Mineral-use planning is badly needed. If developed wisely, this region can be made one of the Nation's most valuable recreational areas and the chief source of hardwood lumber.

Midwestern region.—This might be called the agricultural heart of America. Corn, swine, beef, oats, and dairy items are the basic elements of the area's productions. While the region is in one sense essentially rural and agricultural, it seems to be focused upon Chicago as a center. Around the margins stand a number of considerable cities—Detroit, Cincinnati, St. Louis, Kansas City, Minneapolis, St. Paul, and Milwaukee. This arrangement gives the region a dual aspect, urban industrial and rural agricultural. The major land problems are those of erosion on cultivated fields and deforestation of hilly land along the streams, although large areas are without either problem. Water planning has mainly to deal with navigation, pollution, and city water supply. Transportation improvement and coordination is much needed.

Eastern region.—This area is unique in many ways. Half of the urban population of the country is included within it, and nearly two-thirds of the value added by all manufacturing accrues within its boundaries. It is, therefore, essentially an urban region with industrial and commercial interests. Agriculture, while important, is definitely subordinated to urban influences. Industrial location and decentralization, subsistence homesteads, city planning, stream pollution and water supply, local recreation on shores and in parks, municipal forests, and summer-residence

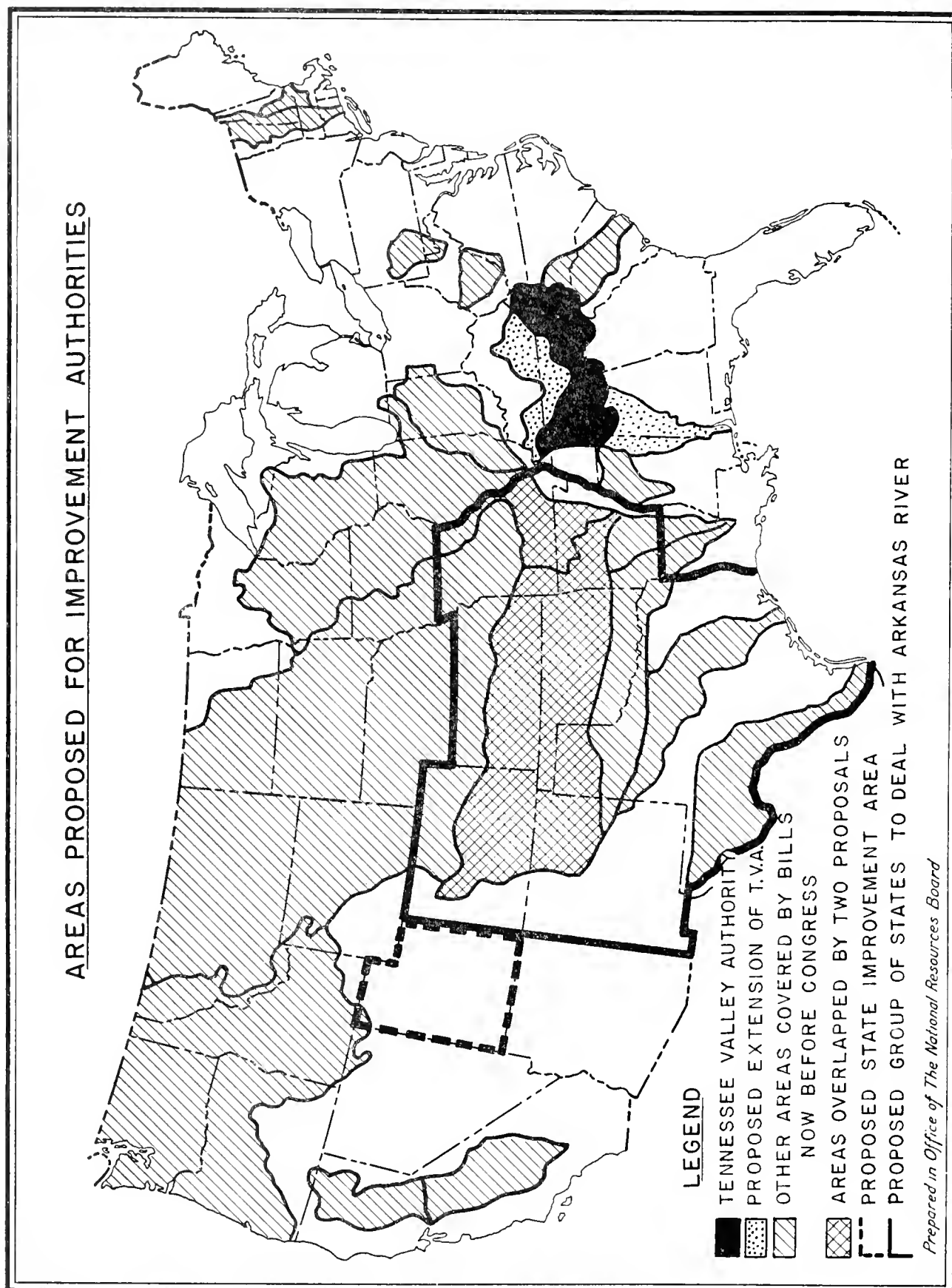


FIGURE 21.

question, but one which cannot be answered categorically. Certain considerations, however, do suggest themselves.

Many planned activities will, of course, be carried out directly by the departmental bureaus and special agencies of the Federal Government. The areas or regions dealt with will depend upon the functions involved, and will, therefore, become a problem of secondary importance. The same may be said of State, county, or municipal measures. In these cases, the chief consideration is that such activities harmonize with the recommendations of the regional planning board within whose territory they are carried out.

"There are many instances in which the present political subdivisions are not so organized as to facilitate most advantageously the development, financing, construction, and operation of desirable public works. No one of the existing political subdivisions may embrace the entire area that could be advantageously served by the undertaking. Often there is no unit in the area with the necessary administrative organization for the planning, construction, and operation of the development. The territory to be developed may embrace parts of two or more States. The most advantageous area for flood control, irrigation, soil conservation, port development, sewage disposal, electricity supply, or for other functions may not coincide with the boundaries of any political subdivision. The existing units may not always be able to finance the operations. Consequently, it may be necessary to devise new governmental instruments to carry on those functions. These new units have taken the form of special development authorities.

"These special development authorities may be created by the Federal Government or by the States. As is well known, the United States so far has created only one such agency, strictly defined: The Tennessee Valley Authority. Since TVA is being treated in detail in another place only two obvious points need be

sites are of paramount importance. Transportation planning, port development, and low-cost, large-scale housing programs loom large within this region.

Northeastern forest region.—This unit includes northern New England and the Adirondacks of New York. It is essentially a forest region, of relatively low value for agriculture except in the Aroostook district, the Champlain lowland, and a few other smaller areas. It is predominantly rolling to hilly, but rises to low mountainous proportions in a few places. The population consists largely of native American stock predominantly rural in habit. Large cities are lacking and industrial developments few and small.

Critical problems consist of submarginal land-use, faulty institutional patterns, scattered rural settlement, and, in certain parts, faulty forest policy. The final destinies of the region would seem to turn upon recreation, forestry, wild game, and an improved pattern of rural land use. This area is often associated, in the popular mind, with the great urban and industrial region on the south. Particularly is this true in connection with the New England portions of the two regions. Traditionally, New England has been popularly considered a single unit. While it has a certain unity from the historical and traditional standpoint, differentiation has been proceeding apace for nearly a cen-

made here. It is set up as a government-owned corporation and it is administered as an entirely independent agency whose work is formally integrated with that of the other regular Government departments only through common responsibility to the President."³³

The regional boundaries of such a political subdivision must necessarily approximate the project area involved. A map depicting the areal units for construction and development so far proposed or in operation (see fig. 21) shows that they are identified with river drainage basins. This seems to be the result of the fact that "Congress has ultimate authority over the flow of all navigable streams and their tributaries within the United States." For example, "The Tennessee River system forms a sphere of legal authority vested in Congress. The Tennessee Valley Authority was, accordingly, created by Congress to carry out certain improvements within this river network or sphere of authority.

"The improvement of navigation and the control of flood waters give rise to great dams; such dams in many instances produce hydroelectric power; abundant cheap electric power improves working and living conditions, and is a major factor in many lines of industrial production. Thus we find a sphere of authority growing out of the flow of electricity, as well as the flow of water.

"The use of land affecting soil erosion is another sphere of congressional authority over navigable streams. Otherwise, the purpose of flood control is defeated through the silting of reservoirs and the obstruction of navigation."³⁴

Congressional authority over navigable streams has thus formed a ready ingress to performing a variety of needed operations. Moreover, dams, hydroelectric plants, and navigable channels are concrete and compelling objects. Similarly, river basins are readily identifiable units of territory. These considerations

tury. Today this has become so manifest as to destroy all regional economic unity. One casual evidence of this is the undiluted Yankee character of many of the hill towns of Vermont, for example, as contrasted with mill towns of southern New England where one may see signs over the shops announcing that "English Is Spoken Here." The two regions are interdependent and interrelated, but they are not similar; nor are they parts of any conceivable regional whole.

Gulf coast region.—While ordinarily thought of as part of the "South", there is a narrow coastal strip extending from Georgia to Texas which does not lie within the Cotton and Tobacco Belt. Its climate varies from tropical to subtropical, and its agricultural interests include rice, sugarcane, citrus fruits, and winter vegetables. Owing to climatic, littoral, and other advantages, this area is potentially one of America's two great winter recreational regions. Major planning problems center about forest and wildlife conservation, drainage of swamp lands, the development of suitable forms of tropical agriculture, and the provision of winter recreational and resort facilities.

³³ See the forthcoming report of the National Resources Committee, "Division of Costs and Responsibilities for Public Works," chapter VII.

³⁴ Earle S. Draper: *Op. cit.* p. 3.

have tended to fix the development region in terms of hydrographic areas in nearly all instances. This will probably prove to be a mistake if applied wholesale, for there are, in any planned program, many things beside river improvement to be carried out, e. g., rural resettlement, soil conservation, coordination of transportation pattern, changes in agricultural land utilization, and so forth. In very many instances, such undertakings cannot even be identified with a drainage basin. They may, however, be readily identified with some other geographical base more suited to the nature of the activities involved.

If it become a major policy to carry out a large share of the planned national program by means of improvement authorities or Federal corporate agencies, the question of area will be highly significant and should be analyzed carefully. In the case of the Tennessee Valley Authority, the planning region and the region for construction and development have been made to coincide. This may not be desirable generally, because the region for construction is in its very nature a project area, whereas the planning region is a problem area or group of problem areas.

The corporate authorities now proposed or in operation have been formulated often without reference to regional plans in the making. This type of procedure seems to be illogical. Development without prior planning already exists in plenty. To create developmental authorities, which themselves have not grown out of sound regional planning, is to not only invalidate the latter, but to further add to the existing muddle. It is, therefore, proposed that developmental authorities, whether based upon river drainage basins or other kinds of areas, be made to follow rather than to precede regional planning. It would seem highly desirable to institute regional planning so as to allow each

region, under the guidance of the National Resources Board, to determine as one of the fruits of such planning the areal authorities best suited to the effectuation of its plan.

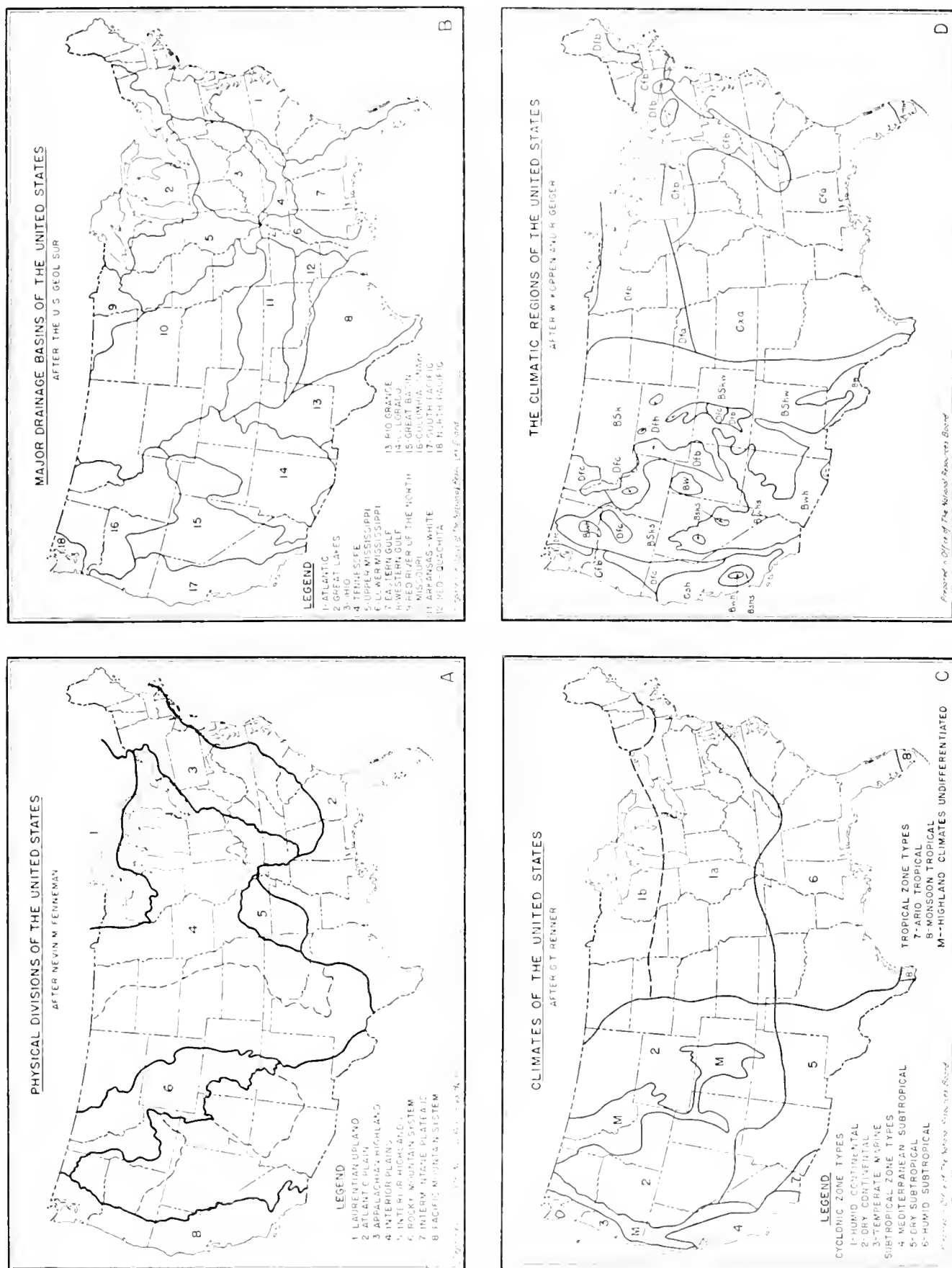
5. Regions for Operation and Maintenance

At first thought, it may appear that existing political units are as inadequate for maintaining and administering planned works and constructions as they are for regional planning and development. This, however, does not seem to be wholly the case. Many of the works and improvements now under way may probably be turned over to the local, county, or State governments for operation. It is also possible that groups of States operating under interstate compact relations might constitute desirable maintenance units.

In the case of the Tennessee Valley Authority, the region for operation has been made to coincide with that for construction, and this may prove to be the optimum arrangement. Hitherto, this has been the premise underlying the operation of conservancy, drainage, and irrigation districts.

On the contrary, there will undoubtedly be some instances where a new type of region will have to be devised. For example, the entire Appalachian Mountain area may be the region for planning purposes (see fig. 20); the Tennessee or Cumberland Valley might be the region for construction and development (see fig. 12); but for operation and maintenance the entire radius of power transmission or commodity distribution may prove to be the desirable region. (See fig. 13.)

In any event, the answer to this problem cannot at this point be returned with any certainty. It should, however, become increasingly apparent as progress is made in planning and planned development.



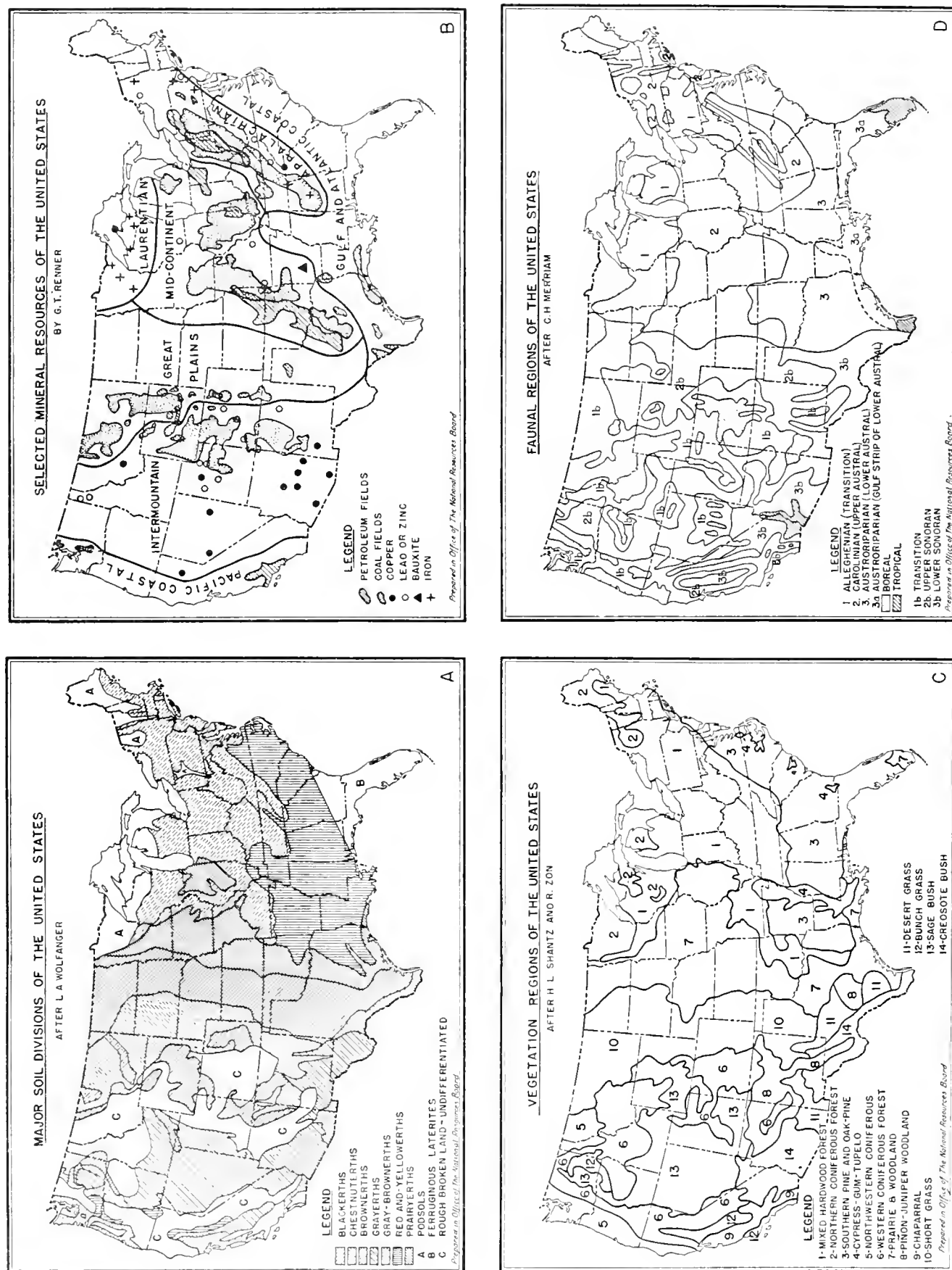


FIGURE 23.

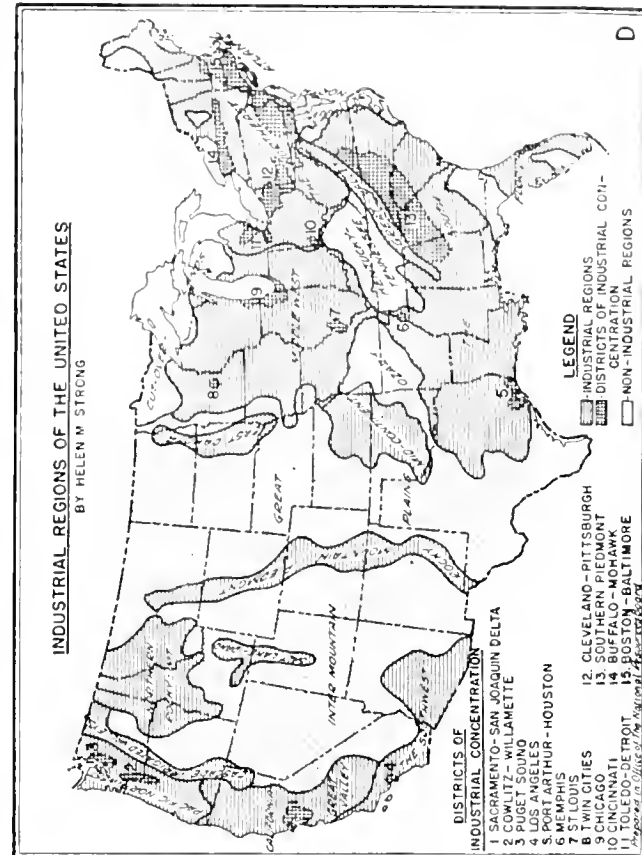
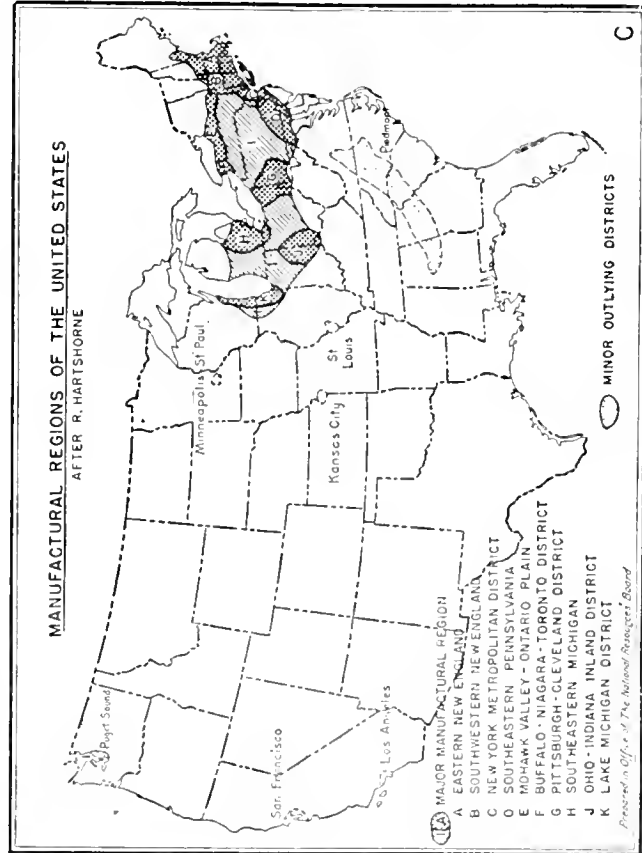
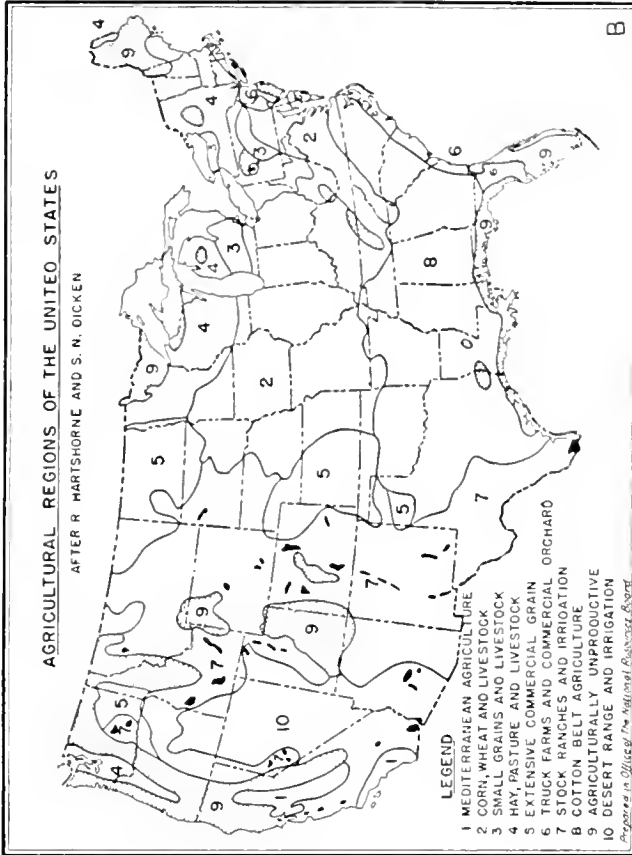
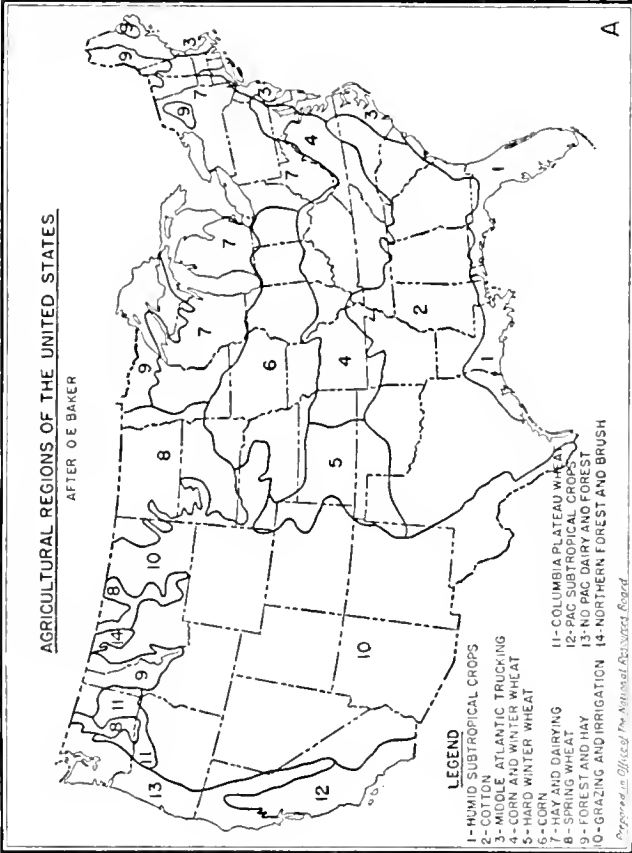


Figure 24.

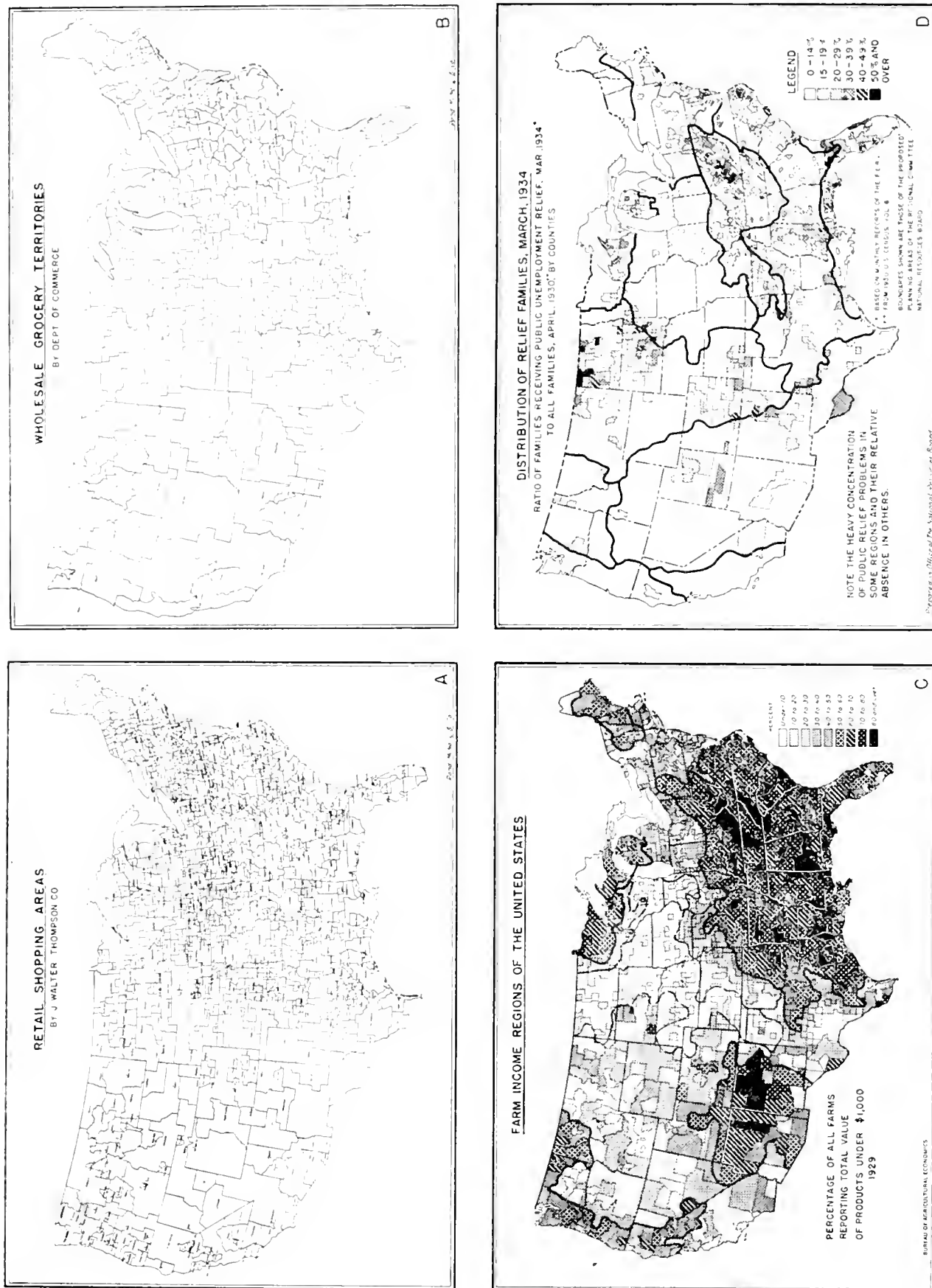


Figure 26.

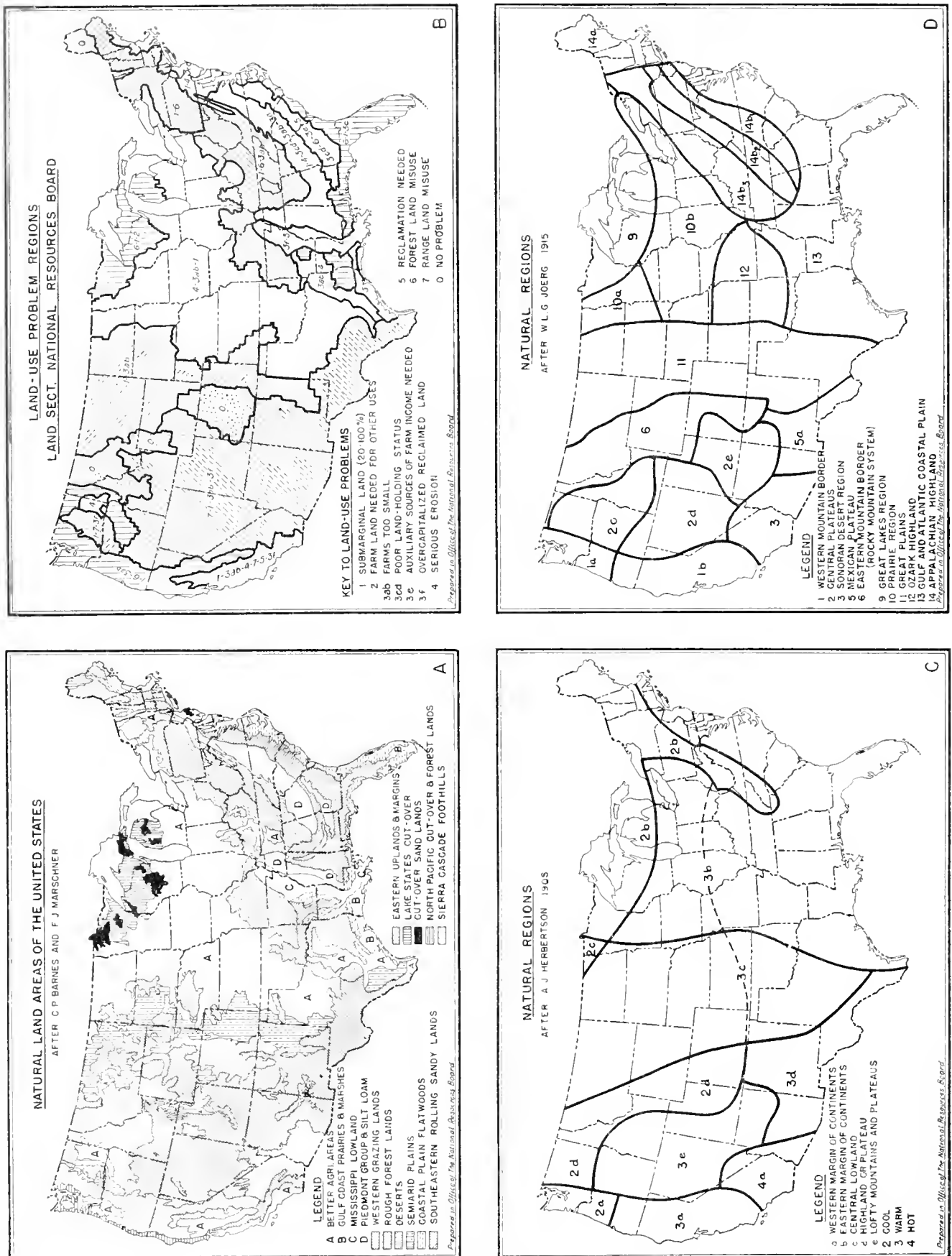


FIGURE 27.

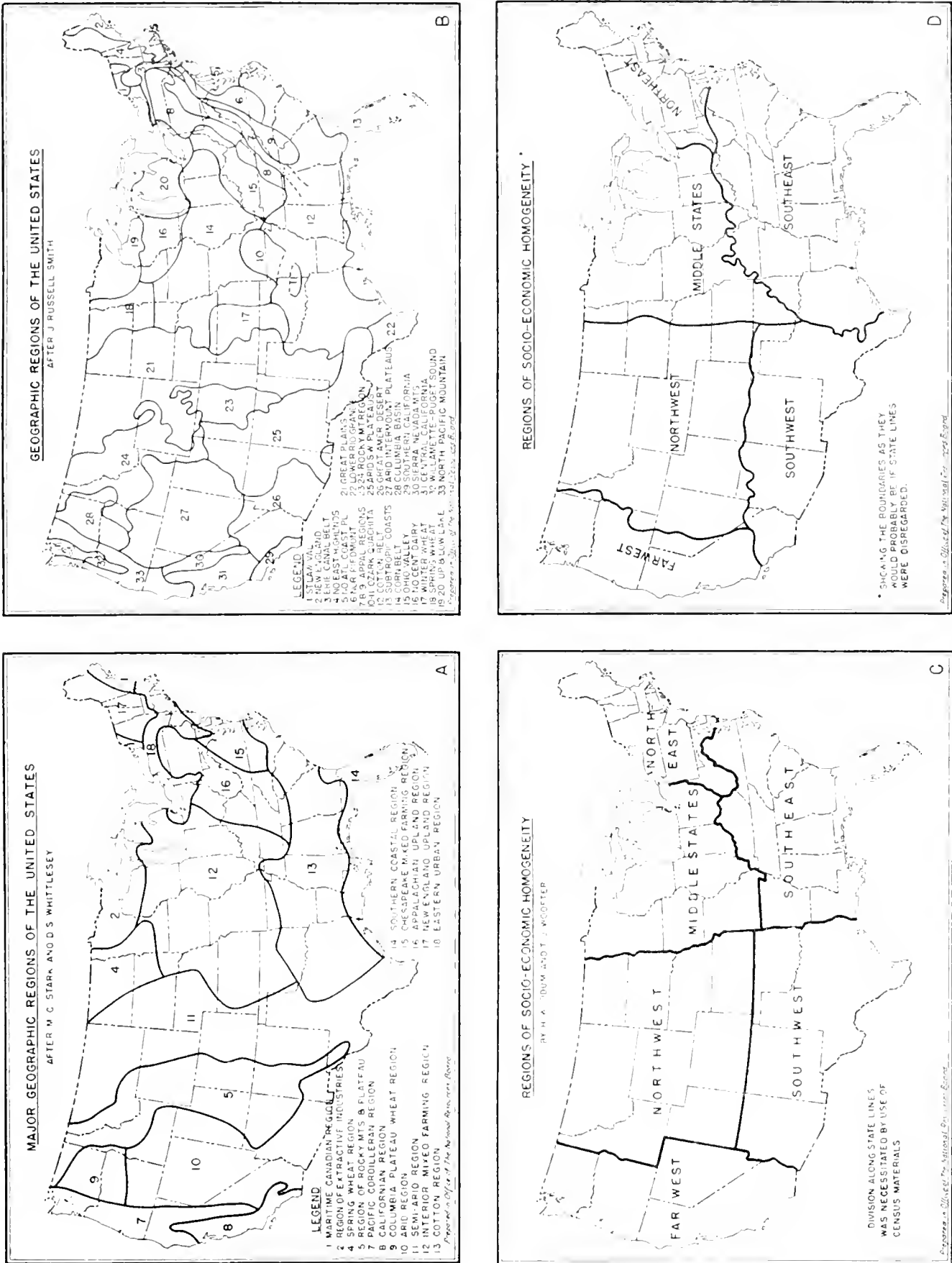


FIGURE 28.

CHAPTER XVI. SUMMARY STATEMENT

"There is everywhere new evidence for the reemphasis upon the geographical and demographical point of view in research and interpretation. More and more, regional analysis becomes the first essential for public administration. It is not possible to understand or to plan for the next period of American development without a vivid sensing of great regional differences."³⁵ Accordingly, a fairly elaborate review of regions and regionalism has been made in order to discover what factors and considerations are involved, and what principles should govern their use as a basis for administrative arrangements.

The facts brought to light through a study of regional science, indicate quite clearly that certain ecological principles, involving the interrelationship of economic, social, political, and environmental factors, are the fundamental elements of regionalism, and that there are geographical rules which apply to the formulation and delineation of regions. In laying out the regions and regional centers necessary for planned national development, it would seem that questions of mere tradition and convenience are insufficient. It is but logical to suppose that the areal basis of planning and planned development should itself be planned according to sound geographic principles.

Obviously, these considerations must underlie any valid or sound proposals for regional planning in this country, rather than allow it to grow up in response to more transitory factors of facility or convenience which are present in our existing unplanned structure.

Five possible bases for determining regions for the purpose of planning have been outlined. These should be weighed carefully before determining future policies. The five schemes outlined are undoubtedly of unequal validity and usefulness; it is conceivable that no one of them is entirely adaptable to the purpose at hand. At this stage, the composite or multifactor region would seem to be the most useful, especially when visualized as possessing a moderately elastic boundary—extensible or retractile for individual planning elements or functions.

The division of the country into multifactor regions which is here described consists of 12 major regions as shown in figure 20. These include 3 regions which are dominantly forest-recreational areas, 1 urbanized-industrial region, 1 grazing region, 4 agricultural re-

gions, 1 mixed agricultural and industrial region, and 1 mixed recreational and agricultural region. These or any other system of regions which may be adopted will, it is hoped: (a) Decentralize the present Federal assumption of planning from the National Capital; (b) give additional support and redirection to the energies now going into State planning; and (c) bring nearer to the common citizen the relevant aspects of national planning. Moreover it is hoped that such areal arrangement will utilize that general sectional loyalty and consciousness which now exists by turning it directly into planning activity rather than allowing it to be diluted or lost in a general national current. In the latter, there is all too much chance of such valuable motivations developing into violent backeddies and swirls of Federal distrust or jealousy rather than reinforcing the main current.

The planning board or commission serving any region must eventually focus its activities at some convenient and logical nucleus or regional capital. This will serve as a center of correlation and integration. For each region the major objective should, of course, be to formulate a regional plan, and to bring about the development of an improved regional pattern of culture and works. In connection with the making of such a plan, the planning center functions more or less as the hub of the wheel, upon which planning operations turn. Logically, the planning center or capital should lie within the area which it serves, preferably near the center of gravity of the region. Logically, too, no region should possess more than one center, else its regional planning activity become as a wheel which is required to turn upon two or more hubs simultaneously.

The foregoing search for the essence of regionalism in the United States yields, therefore, not only a set of possible planning regions, but it likewise provides a criterion for use in selecting regional planning centers as well. To those who are inclined to think of regional planning mainly in terms of planning centers, it may be suggested that no center can have any real regional significance except as it represents a whole region, and serves to focus its problems, conserve its larger interests, and receive its support.

Regions for construction and development should be set up in accordance with the specific needs of the project areas involved, and should preferably originate out of regional plans.

³⁵ Howard W. Odum: *The Case for Regional National Social Planning*, *Social Forces*, October 1934.

The optimum type of region for operation and maintenance cannot at this time be determined satisfactorily, but it should probably depend upon the type of activity carried on.

In conclusion, it may be pointed out that regional factors are in part measurable and predictable, and in other part they are traditional, contrived, and emotional. Whether regionalism results from the growth of a sense of community, in turn dependent upon common traditions, interests, and aspirations, or whether it results from man's rational analysis of economic and governmental problems needing solution, it is nonetheless regionalism. It is fairly obvious that the most desirable form which regional development might take is that which results from a composite of factors, from adequate attention to all considerations affecting the regional complex.

Regionalism has made enormous strides in recent years. It is a movement which may be expected to progress steadily and rapidly. The problem of the planner is to collect the basic information, outline what needs to be done, criticize proposals which may be advanced without sufficient investigation. In this planning process, there is a race between regional consciousness which is traditional, emotional, and nonrational, and the intelligent planning, instrumentation, and criticism whereby they may be directed into the most fruitful channels.

Regionalism is real, but its instrumentation is not self-executing. One must therefore pass on to examine those administrative problems which in the interest of human welfare make the meshing of levels of government more necessary, and the rational analysis of regional possibilities more imperative.

PART V

THE INTEGRATION OF ADMINISTRATIVE AND GEOGRAPHIC FACTORS IN REGIONAL PLANNING

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CHAPTER XVII. GOVERNMENT AND AREA: THE PROBLEM RESTATED

The foregoing record of the extreme complexity of the problem of relating political boundaries to interstate regional areas, may be a cause of further discouragement to those who hope for solutions in part through the use of Government and the public services. When there are added to those complexities the fact of sectional interests and loyalties and the employment of this very complexity by those who oppose various public policies, the wonder is that any comprehensive functioning of the Government over a continental area is possible at all. Secession movements and civil wars are more easily comprehended as the difficulties of cooperation between the national whole and its various parts are revealed.

This discouragement has real dangers. A similar distrust of and sense of frustration at the failure of governmental systems in many parts of the world to function adequately in the face of the problems of recent years has led to revolutionary movements in some States and to widespread political despair and indifference. There is a feeling that the rearrangement of political boundaries is so difficult of achievement, due to the interests that have grown up under their protection and encouragement and the lines of political career and loyalty created by them, that nothing can be accomplished through consent and representative institutions. But this is only part of the difficulty. Even if it were possible to rearrange the boundaries, what should the new boundaries be? How should they be determined? The divergences of view on this point even among those who attempt an objective approach, as revealed in part IV, are very great. When one adds to this the natural divergences that would arise from interests that would be affected favorably or unfavorably by a given boundary change, the proposal to remake the larger states of the world in terms of rearranging their boundaries to fit more closely the problems related to area with which they must deal is seen as a counsel of despair. It cannot be too often repeated that under any conceivable system of political boundaries this discrepancy between them and some, at least, of the problems which require political action, even if of the simplest, will be present. The lesson would seem to be that we have to devise means for facilitating the cooperation of different governmental units, each possessing some necessary portion of constitutional authority required for the solution of a given problem. The study of this lesson is urgent not

merely in order to get at the immediate task of administration, but for its wider civic effects. If the American people, or the citizens of any other State in the world, feel that their political institutions are really effective and usable as public services through which their problems can be attacked and solved, direct action, personal or party dictatorship, and political corruption find little soil in which to take root.

In parts II and III of this report there are illustrations of the appearance of these problems which require interstate and Federal-State cooperation for their solution, and of the ways in which this challenge has been met by various experiments in public administration. From these experiences it is clear that the political inventiveness founded upon experience, observation, and analysis which characterized those who drafted the Constitution has been a resource at later times, as they had hoped, to their successors. Where governmental institutions, in the narrower sense of the term, were not in existence, they have been created, or an informal civic organization has been established to explore problems and possibilities. The rise of metropolitan planning organizations which follow their problems into several adjacent States, as in New York, Philadelphia, and Chicago, is paralleled by the establishment of an official Boston metropolitan district within the single State of Massachusetts and by the interstate Port of New York Authority. The creation of a national resources board (now committee) results in the rapid growth of State planning boards, and the establishment of two regional planning commissions based upon groups of States, one of which was preceded by earlier civic organizations of the region. In administering many of the functions of the National Government, bureaus have cooperated with State government departments in order to develop the required variety of program which the variety of conditions throughout the country requires. Agencies, finally, have been created to deal with single factors—forestry, for example—or areas marked by the predominance of a problem or project—illustrated by the creation of the Bureau of Reclamation and the Tennessee Valley Authority. Nor should we forget that even in the extensive national program of the past 2 years in which stress was naturally placed upon an immediate Nation-wide attack upon problems arising out of our interdependent system of markets and finance, the use of Fed-

eral-State administration, and not of national administrative agencies alone, has been extended. The administration of the employment service, of the economic security program, of the public works program, of relief, of the Civilian Conservation Corps, for example, illustrates the point.

But we must note the dangers inherent in this very response to the recognized need for adjustment. It is a danger present throughout our system and operation of government. The very profusion of governmental agencies may prevent there being taken at any one point a total view of governmental policies relating to a given community, State, or group of States; or to an area in which the nature of the major problems is such that they form an organic composite group, to be treated comprehensively, or at least studied in the light of their interdependence, or of the whole of the United States. We are particularly concerned here with this problem as it affects the formulation of the national policies through the instrumentalities of the National Government. The responsibility of taking such a total view and formulating policies and objectives and priorities that must flow from it is that of the President. The provision of a staff and a procedure whereby the requisite data are currently made available to him is therefore, as suggested in the introductory part, as vital as the provision of a budget staff. The operations of the two, indeed, are essentially supplementary, since a financial program must reflect, if it is accurate and revealing, the current operations of the Government and its future commitments. Administration is government in action through human agents at some actual point within the territorial jurisdiction of the State.

The channels through which the contributory elements of a national policy flow, as revealed in the earlier parts of this report, and whose coordination is required as staff assistance to the President and his associates, may be again summarized briefly here, in order to see precisely what is required of planning procedure in the field if the local impact of the program is to be visualized:

1. The departments of the Federal Government.
2. The functionally similar departments of the State and interstate and local units of government.
3. The Government departments and various associations that deal with single factors such as commodities and services or areas with peculiar and homogenous problems which call for action through government.

Coordination of program-making among the above agencies is required because the division of powers between Federal, State, and local governments under the Constitution of the United States, of the States, and the laws of both, prevents any one unit from dealing

comprehensively with many problems; because the allotment of duties and responsibilities among national departments, among State departments, and among departments in local governments requires coordinated action among them for dealing adequately with many problems; because basic geographic factors not coterminous with either the whole Nation or of single States or groups of States are reflected in problems which can be dealt with only through interstate and national-interstate powers; because the formulation of a national policy for any given single factor—wheat, steel, transportation—is certain to have important implications for the whole economy of any local area within the Nation, of which account should be taken before a program is adopted in order to make proper provisions to prevent maladjustments and to establish compensatory arrangements.

In planning and executing a program based upon these factors, the preliminary analysis outlined above supplies a basis for indicating the list of priorities to be followed by the different governments concerned, for discovering what organizations are required for construction and operation, and for distributing the cost of the benefits to be derived. It cannot be emphasized too greatly that all such preliminary appraisals are essential to the adequate determination of the best type of organization of the construction and operation of the projects which are recommended in a program. It is sometimes possible to avoid the creation of new agencies if there is a careful assignment to existing agencies of some portion of the execution of the program by an agreement upon the division of labor and the time sequence whereby the allotted portions of the work will be undertaken. A relatively simple example of this is found in the cooperation of the United States Forest Service with State conservation departments in the selection of areas best adapted to public, commercial, and recreational forests as against those best adapted to private ownership and management, including the adoption of schedules for blocking up contiguous areas for the National and State forests in the light of the need for permanent wood resources of sufficient amounts to insure a continuing forest-products industry in those areas. Such cooperation does not destroy the effectiveness of the work of either agency, but rather enables both to fulfill their respective programs in the area and relate them to the needs of private industry. When one adds to this the fact that account is also taken of the preservation of watersheds, the planning of highways in the forest area in the light of use and settlement, and the provision of adequate revenues for maintaining the local services required, the case for such cooperative action is only the stronger. It is indeed unanswerable if many parts of the country

are to be given a chance to realize the best utilization of their resources and potentialities. None of these objectives can be realized, however, unless there is a careful determination of a long-time program indicating agreement among the agencies of the steps to be taken each fiscal year by each as its respective contribution toward the total result.

It is clear that an essential part of such staff service is the recognition of the peculiar importance of administrative personnel capable of taking a large view of the responsibilities of their respective departments and units of government. While something of this point of view can be stimulated and encouraged in the education of technicians and of administrators generally in their earlier years, it must also characterize the very atmosphere in which they do their work as they develop their careers. The creation of such an atmosphere in which institutional jealousies are discouraged is not an easy task in any form of social organization, and is equally a problem in professions generally. It requires deliberate effort, and the creation of procedures and organizations of an informal kind which will lead the administrator to acquaint himself with the problems of his colleagues in other units of government. It

is precisely this which the development of planning procedure and of the planning profession has set itself to encourage. It is only through effort to attain such an approach, as we have seen, that the National Government or the State governments can adequately execute their own respective tasks. How such a procedure may be devised, and such an attitude implemented, is the subject of the following and concluding section of this part.

This point of view assumes continuing change in the relations of parts of this Nation to the whole in terms of communications, new techniques for the utilization of natural resources, population movements, and consequent problems of government. It assumes that there can be no final and static assignment of governmental functions to political units, as American history amply demonstrates. We cannot predict how deeply, and in what manner, the loyalties of people to areas will persist and change. We accept as a fact that throughout all possible changes the problem of attempting to coordinate diverse powers and organizations of government with the problems with which they must cope if representative institutions can function will be persistent.

CHAPTER XVIII. COORDINATE PLANNING FOR INTERSTATE REGIONS

1. The Problem Narrowed Down

(a) *Posing some questions.*—In facing the extremely complex problem of achieving coordinate planned development for interstate regions, the following questions press for satisfactory answer:

How can the development efforts of the several levels of government be effectively integrated on an interstate regional basis?

Is formal regional organization required for this purpose, and if so, what types of organization?

What systematic procedures will facilitate the planning of coordinate regional development?

How can the various and changing interstate functional areas and regions be reconciled to the present need for effective coordinate planning of the current and emerging interstate development functions of the governments?

We may briefly review the way in which these questions arise. Several levels of government may take part in a single large-scale development enterprise. In one large multiple-use project, such as the Boulder Dam, the Federal Government, several States, and several local governments may be directly concerned and, in fact, may directly participate. Such enterprises tend to become increasingly complex and at the same time they tend more and more to lie across the boundaries of States and of local governmental units. In this situation the problem is to obviate confusion, delay, and waste by bringing the governments together in some intergovernmental formulation of programs and by bringing the interrelated projects together into some composite development plan. In part II of the present report much evidence is cited to show that this problem is now widely recognized, particularly in the field of large regional development. But failure to achieve effective coordinate planning on a large-scale interstate regional basis still seems to leave plenty of opportunity for embarrassment in discovering, by way of possible illustration, one governmental agency proposing to settle farmers on land which another agency is struggling to close against agriculture, or in finding a navigation improvement in direct conflict with an extremely important and valuable wildlife enterprise. Or we may find big reservoirs obliterating highways which could and should have been located to great advantage above the flow line. We may find power production away ahead of regional power consumption; or the reverse. Not only confusion and waste result from

failure to systematize coordinate development planning, but also frustration and delay unavoidably follow. The development of a region's full potentialities necessarily awaits the piecing together of the many elements which may conceivably be crystallized in coordinate regional planning.

Furthermore, the preceding chapters bring together convincing evidence that the development activity, in reality the whole program of government, emerges not only from State and national attitudes and desires, but very importantly also from needs and purposes which can only be described as "regional", from "regional consciousness" and "regional climates of opinion." It should be emphasized that in national development the solution of the problems of interstate multi-governmental enterprises must rest upon the recognition and utilization of these regional social forces. Both in delineating areas for integrated regional planning and development, and for channeling opinions and proposals, this type of regionalism must be one of the controlling considerations.

Government and public administration have struggled with these problems from various angles of approach. A number of important attempted solutions are discussed in part III. Various organizational arrangements appear from time to time and others will undoubtedly continue to appear. None as yet established seems perfectly suited for application to all parts of the country.

We have to discover and to build up the arrangements whereby, on a decentralized basis and as nearly as may be for regions, large-scale, interstate development work of government can be planned and carried out in an integrated way, so that the citizens may derive the maximum of satisfaction from this work. Our objective is to facilitate the processes by which sensible interstate regional development policies and programs can be formulated through coordinate action of Federal, State, and local governments. Instead of expending a major part of our public revenues in correcting avoidable past blunders, we want to have the stream improvements, the reservoirs, the highways, and the wildlife enterprises, for example, fitted together so that they form parts of one balanced composite plan, on the execution of which each participating governmental agency may do its part without conflict or confusion, to the result that transport, power, and recreation (again, only for example) may each realize

its full usefulness. Coordination has always been carried on, but in the main imperfectly. More formal organization and more systematic procedures may be required on an interstate regional basis.

(b) *Development enterprises.*—It is not possible to foresee how wide a field of governmental activity may involve the regional factors with which we are concerned. For the time being, in order to more closely examine problems of organization and procedure, we may delimit the range of enterprise with which we are dealing. More or less arbitrarily we are confining this examination primarily to direct governmental activity in physical development and redevelopment. This category includes Federal-interstate enterprises having to do with waterways, ports and harbors, flood control, hydroelectric (or other) power, irrigation, drainage, rural and urban settlement, forestry, erosion control, airways, railways and highways, parks and parkways, preserves, monuments, refuges and other wildlife enterprises, production of certain specified commodities (as the manufacture of fertilizers under the T. V. A.), water supply, sewage disposal, pollution control, and governmental measures such as zoning which influence the utilization of lands, forests, and waters. It is not implied that this field constitutes the whole of regional or national planning nor even the point of beginning on national and regional planning. Merely it is a field in which it is definitely believed that regional planning will be immediately useful, and in which analysis of organizations and procedures can be made fairly well at this time. It is not essential to determine now whether the regional planning program should deal directly with other basic governmental enterprises such as tariff adjustments, extension of industrial or agricultural credit, control of industrial and agricultural production, health regulations, motor-truck regulations, crime detection, deposit insurance, mortgage insurance, unemployment and old-age reserves, and a host of other enterprises in the widening realm of governmental responsibility. Always, physical development must be planned in the light of these other policies and programs, and always the impact of one upon the other must be appraised. But, for the time being, we are concerned with regional planning for the “development enterprises” of Federal-interstate character.

(c) *Federal interstate enterprises.*—We find that many policies and programs of the Federal Government are definitely national or primarily local in character, and hence can have no important regional significance. As examples in this category we may cite, at one extreme, some national monetary policies, and at the other extreme, a program of housing projects in which the Federal, State, and municipal gov-

ernments may take part, but which have no great interstate, regional importance. They may be most important national policies or parts of a most important municipal or State program and still not possess the interstate regional character with which we are primarily concerned here. Most of the types of activity mentioned above in describing “development enterprises” have an interstate regional significance, and again, these are the matters with which we are dealing. The formulation of integrated policies and programs for governmental action which does not involve regional factors can presumably be dealt with in Washington, in the State capitals, and in the localities where the activities themselves center. Organization is required in these fields of planning, but Federal interstate regional organization is not essential for them. We are examining the problems of planning for those development projects in which the Federal Government is concerned as a part of orderly national development and which at the same time involve interstate or regional considerations. We find that regional factors importantly affect the following types of development enterprises: Most waterways; many port and harbor works; most flood control on interstate streams or their tributaries; virtually all power development; irrigation drawing from interstate waters; some drainage projects; settlement projects involving interstate movement of populations; nearly all major government forestry work, county, State and Federal; erosion control as it influences regional land utilization; railways, highways, and airways; Federal and State recreation systems and wildlife programs; Government manufacture of any such important product as fertilizer; water supply, sewage disposal, and pollution-control programs affecting interstate waters; and zoning and taxation measures which directly affect the utilization of lands, waters, and forests over regional areas. Here we have virtually repeated the list of types of Government work named earlier as “development” enterprises, but indicating that we are dealing with them primarily when they have regional importance, as they usually do. However, the list is illustrative rather than complete, and it is not intended to exclude other development works of government which involve regional factors. Nor do we contemplate finally excluding from the operation of regional planning those enterprises outside the “development” category; we are simply limiting our analysis as a first effort at the solution of the intricate problems emerging from this study. Justification for this limitation is reinforced by the impelling evidence that in this field the more effective coordination of planning and execution is urgently needed and will be immediately useful.

(d) *The phases of development work.*—Each enterprise of development passes through several stages on its way from inception to completion. Two main phases may be distinguished: The first phase, in which the inspiration, the survey, research, over-all policy formulation and planning, and integration as a part of development programs, all take place, and the second phase, in which detailed design, construction, and operation are carried through. For our purposes here we are keeping these two main phases separately in mind; they require somewhat different treatment in prosecuting orderly development programs. We are calling the first the "planning phase", the phase of policy formulation and of program making. The second we are calling "execution." Obviously the distinction is not always clear cut and the phases of planning and of execution are often interwoven in the sequence of development work. Nevertheless, the distinction is important in our problem. In fact, failure to make the distinction has confused much of the discussion about development activity, as pointed out in subsequent paragraphs.

It may also be indicated here that, in considering the several phases of governmental development activity, we have kept constantly in mind the distinction between technical staff work, on the one hand, and the exercise of the legislative and chief administrative functions on the other hand. From the planning and administrative staff there flows to chief executives and to legislative bodies the information and recommendations assembled by the staff. The Congress and the legislatures, and, through authority delegated to them, the President and the governors (and their executive associates) take the staff material and, basing their judgments in part upon that material, actually formulate the development policies and programs, allot funds, and promulgate instructions for execution. The staff work with which we are concerned is an integral part, but only a part, of the political process by which governmental programs are formulated and carried out. From one point of view, our problem is that of devising ways in which, on regional development matters, the political processes of the States and the Nation can be strengthened—ways in which staff work can aid legislative bodies and chief executives to make determinations and authorize programs which will most nearly meet the needs and desires of the constituency.

In carrying out this staff-planning function there are, generally speaking, two stages in the sequence of governmental activity at which staff work may be useful in the coordinate prosecution of regional development enterprise. First, preceding the formulation of policies and programs, information and recommendations developed by integrated staff work are transmitted to

chief executives and legislative bodies to assist them in their determinations. Second, after the National and State (and sometimes local) legislative and executive officers have, by statute and by executive order, set in motion some part of a regional development enterprise, the administrative staff exercises the discretionary power delegated to them, and they also carry out the specific instructions given them. Here, coordination between various Federal staff officers and between Federal and State staff officers in the exercise of discretion in the field, may be considered a "planning" function, while integration in carrying out actual development is part of the "executive" phase. This consideration may be kept in mind when we discuss problems of organization and procedure.

Examination of the enterprises here considered shows at once that the phase of coordinate staff reports on planning may conceivably be carried through by one regional planning agency in which the governmental units at interest are drawn together, and that this planning phase necessarily deals with large regional areas. Conversely, the execution of the enterprises lies for the time being directly in the hands of numerous different agencies operating over various, generally smaller, project areas. A coordinate development plan for the cut-over region in the Lake States may be shaped up for the whole region by the collaboration of Federal and State staff officers. But the United States Forest Service carries out a number of individual forest unit projects scattered over the region, and the State conservation departments likewise with State forest projects: the War Department executes several separate harbor projects on the Lakes, and also several navigation projects on the Mississippi River; the States, in conjunction with the United States Bureau of Public Roads, undertakes a 1-year to a 5-year program for improving certain specific highways; the United States Biological Survey and the State Conservation Departments each have several different wild-life projects at various points throughout the region, and so on. Regional planning involves joint, coordinate program making for the whole region; the execution of enterprises involves innumerable projects at various points and it involves many separately operating agencies of the Federal and State governments.

(e) *Planning.*—Here we use the word "planning" to mean staff assistance in the formulation of policies and programs for regional Government development enterprises. Now, if we look back through the illustrative list of such enterprises, we find at once that the policies and programs for each type of enterprise are necessarily closely interrelated with those for the others. A well-designed policy and program for each one virtually depends upon well-designed policies and pro-

grams for all of them. In other words, the planning we are talking about means the preparation of policies and programs in which the various elements of development are composed into a reasonably well-unified whole. Planning involves functional coordination.

Likewise, in reciting the illustrative list of enterprises we find that the Federal Government and the State governments are both involved in all of them. With legislation, with money, with staff, with regulatory measures, with land—in some way both the United States and the individual States participate. Planning therefore should be done coordinately by the Federal and State governments. Any regional planning organization should make provision for Federal-State planning of regional development enterprises, for coordination among the governments and agencies concerned, and for composite, unified planning.

(f) *Decentralization of planning.*—We have stressed in chapter XVII, the need for decentralized staff arrangements. The material of our problem is such that the required manner of decentralization is fairly clear. The arrangements should bring Federal and State staff people together conveniently and systematically. They should come together in the field, close to the enterprises, close to the people of the regions and within close range of local and regional attitudes and desires. They should come together at the most convenient point in or near the region. But the staff work should at the same time be canalized to the State capitols and to Washington for use by the legislative and administrative authorities upon whom rests the ultimate responsibility for these development enterprises.

While a first consideration is the organization of coordinate regional planning in close association with the State and local scene and in a situation to best reflect the emergence of regional consciousness and regional needs, the adjustment of programs derived in that way to factors involving the national welfare is a matter requiring equally important elements in the arrangement of organization and procedures. Decentralization of staff planning and coordination should aid in the process of drawing up regional plans responsive to local circumstances and it may facilitate an extension of decentralized discretion and authority. But it will not lessen the possible dangers of local pressures shaping the regional plans in ignorance or in defiance of wider national problems. Greater decentralization should be accompanied by effective coordinate planning at the national level and by measures whereby the regional plans and programs may be satisfactorily integrated into the coordinated national policies.

2. The Region and the Organization

For the purposes at hand it would be desirable if such coordinate regional planning and development could be organized in each instance for a definitely bounded, universally recognized, region. With the region clearly delineated, the organization and procedures could be designed for that region and its problems. Accordingly, this study was directed in major part toward the search for satisfactory regions. The difficulties and perplexities inherent in this search are drawn out at many points in the present report, particularly in chapter X, where the New England and Pacific Northwest regions for planning are discussed, in chapters V and VIII, where the experience of the Federal departments is described, in chapter IX, on the Tennessee Valley Authority, and in part IV, where the results of an examination of the geographic factors are given. All of this review of regionalism has reemphasized the deep significance and importance of the regional factors in national planning and development. But it has not produced a set of composite, definitely bounded regions to be offered here as an entirely satisfactory areal division of the country for coordinate planning and development. A number of different approaches are analyzed; still others may be brought to bear upon the problem. Eventually, perhaps soon, by virtue of increasing interest in the matter and wider attention given to it, there may emerge a sufficiently satisfactory set of composite regions for the purposes in hand. Each proposal of a regional scheme which is made from one or another section of the country suggests a certain delineation of the region, as in the case of New England and the Pacific Northwest, and as in the case of the several regional authority bills which have been offered in Congress. Such proposals are significant, but they do not generally represent the kind of reconciliation of development problem, governmental jurisdiction, and interstate area which is necessarily involved in the derivation of regions for planning and development. Meanwhile, we have analyzed and mapped many different factors in regionalism and many different sets of regions. We have a generalized idea of certain regional divisions which cannot be ignored. And in this situation, we are impelled to defer the question of determining a single set of definitely bounded, composite regions, and to explore instead the matter of organization for regional planning. In doing so, it must be kept in mind that the organization problem involves recognition of the regional factors so far uncovered, recognition of the degree of validity which each of several sets of regions seem to possess, recognition of the enormously varied, overlapping, and changing areas over which the re-

gional enterprises are spread, and the recognition of the several generalized (and changing) regions which seem to possess regional consciousness.

3. The Present Machinery

There have been described in earlier chapters the outstanding present examples of regional planning organization, the Pacific Northwest and the New England, and of organization for both regional planning and execution, the Tennessee Valley Authority. Both types seem to have demonstrated their usefulness in the situations where they have been established. Neither type can be recommended for uniform application to all parts of the country in precisely their present form. A wiser course is to carefully follow through the underlying principles which should guide the creation of any new regional agencies, and further, in due sequence to apply and adjust those principles to the various circumstances prevailing in each situation where it may be desired to establish such agencies.

Without reference to the New England and Pacific Northwest regional planning projects, and without reference to the achievements of the Tennessee Valley Authority, we may review the traditional methods of the State and Federal governments in handling regional development problems. The States deal almost exclusively with the problems lying within their boundaries. Only when some interstate problem becomes critical is attention directed to it, and then it is dealt with generally as an individual isolated problem. The relationship of one interstate development enterprise to others has almost always escaped attention. Rarely has a State government perceived clearly that its development problems are part and parcel of the development problems of one or more larger interstate regions. Failing to recognize that the development of the area of a State is deeply enmeshed in the fabric of inter-related regional development activity, there can be, and there has been, very little systematic participation in coordinate regional planning on the part of the States.

In the Federal Government we find¹ a great many attempts to regionalize staff work through district and regional offices. Usually the districting has been done as a hasty compromise and the outcome is rarely a reflection of all the many important regional factors. Moreover, these regions and districts vary in their boundaries so greatly that even within the relatively narrow range of the "development" agencies they create a patchwork which reveals the almost total lack of concern with the essential interrelationship between the enterprises and with the need for integration be-

tween them. In the field at the present time such coordination as is effected takes place more or less casually and unsystematically. Federal agencies and groups of closely affiliated Federal agencies confer when the need becomes pressing, and in a few cases, as with rural land use adjustments and some phases of water-program planning, composite studies and planning are under way as applied to interstate regions. In the main, however, coordination between water, land, transport, resettlement, wildlife, etc., is achieved, if at all, in the National Capital on one hand and in the State capitals on the other hand. With few exceptions, the present effort is to integrate Federal programs in Washington and to take them back to the individual States for reconciliation with State programs. Except as noted above, there is little if any machinery for developing coordinated regional plans through systematic regional arrangements.

Coordination in the capitals has the advantage of great flexibility; whenever two or more agencies wish to coordinate, they are at liberty to do so. It has a further advantage in that it tends to put the function of coordinating plans close to and in fairly direct line with the State and Federal legislative and executive agencies.

The present arrangement, however, does not seem to meet the requirements. In fact, it seems to facilitate confusion and waste rather than coordination. It fails to identify coordinate planning and development with the areas for which planned development is needed, the regional areas. It leaves open the probability of failure even to know when and where conflicts exist and coordination is needed. It is sometimes, probably often, inconvenient in the matter of personnel covering the ground for close study and personal contacts. It establishes no systematic close working relationship between individuals, Federal and State, who must develop the groundwork for coordinate planning for the regional area. The regional integration of the several elements of Federal programs alone remains loose and casual. It fails to meet the need for coordination between Federal and State programs for the region in advance of their crystallization and execution from Washington. It leaves organizational arrangements in a relatively unmanageable form. It renders very difficult the kind of staff reporting to the higher executives which is discussed in an earlier chapter and which constitutes so important a part in the development of integrated programs for the areas. It rarely offers opportunity for a comprehensive, composite understanding of each different region and its problems. It is not arranged to advantage for the stimulation, the fertilization of all concerned with the regional potentialities. Finally, it smacks of that unpopular specter,

¹See chapters VII and X.

bureaucracy in the capitals. All told, the present procedures cannot be said to confirm or to reestablish confidence in the competence of government to deal with the great regional development problems which are emerging more and more clearly in the public consciousness.

Accordingly we are compelled to examine the possibilities of making organized arrangements by which Federal and State plans can be better coordinated on an interstate, subnational basis, recognizing the regions for various purposes and recognizing the needs inherent in the situation.

4. Coordinate Planning to Precede Development

A Federal navigation project, once it is put under way, may destroy a great opportunity for a vitally needed State recreation lake; or vice versa. If planned coordinately in advance, both could have been carried through without damage to either one. A hydroelectric power project, when it is built, may force the relocation of a great highway, which in turn will leave relatively inaccessible a national-park development (on which large sums of money have been expended) and require new facilities to be built, which in turn will interfere with an important land reclamation project and force costly readjustments upon it, which in turn will militate against its success and cut into the potential market for power and so jeopardize the hydroelectric operation. By a little coordinate advance planning all elements could have been satisfactorily adjusted in a regional plan. But a regional plan which recognized only the proposals already made is discovered afterward to have omitted an all-important element, say the reservation of enough gravity water supply for an economically all-important washing process in an ore-reduction plant. The regional plan should coordinate; it should also foresee, canvass the resources and potentialities, draw on the imagination of the region, fill in the gaps and make a rounded plan. All of which can be done only if the planning phase precedes the phase of execution of the development enterprises.

Again, acting hastily but in all good faith, a new set of projects is authorized and a new agency is set up to execute them. Later, perhaps too late, it is discovered that one of the principal projects could better have been omitted from the program and that another could better have been carried out by an existing State agency. The new development authority is floundering on an enterprise in which one error seems to force another one and its area of operation is a serious embarrassment and virtually impossible to change because of established political and economic commitments. Re-

gional planning should be in a position to advise legislators and chief executives of these technical factors in advance of the authorizations.

Quite apart from any question of whether the same agency should plan and execute, the planning should precede the execution, should in fact precede the formulation of the policies and programs which are to be carried out. Effective regional planning would greatly clarify questions of what agency or type of agency should execute the various items of a program. Each development unit, State and Federal, would have its appropriate part in the work. Priorities and the sequence of items would have been agreed upon. The division of costs and of revenues would have been determined. The various agencies of the various levels of government would be working to a coordinated, timed, organized regional plan.

Such perfection in regional planning is obviously extremely difficult of attainment, perhaps totally out of reach. It is, nevertheless, our objective, and every successful move in that direction will save millions and secure greater satisfaction for almost everybody. And, in any event, a basic principle stands out here. However organized, regional planning, the preparation and promulgation of coordinate regional plans in advance of execution, is the very essence of successful regional development as a part of national development.

Obviously, in the normal routine of government, some advance planning has been done for the major development enterprises. The technical services of the Federal Government and of many State governments are excellent. Research and surveys and reporting by technical arms of the governments customarily precede action by the legislative and executive branches. And legislative and executive authorizations are based in an important sense upon the technical reports. Sometimes, particularly in times of crisis, or when dynamic leadership takes the reins, action is started without waiting for rounded-out technical analyses. It is not implied that such leadership should pass up the opportunity for a bold stroke when the situation offers such an opportunity. It is intended to suggest, however, that systematic, continuing, coordinate technical investigation on a comprehensive regional basis will at all times supply the legislative and executive officers with a far richer background on which to base judgments and make authorizations. It is suggested that by injecting regional planning into the technical procedures, confusion, conflict, and waste can be avoided, the potentialities of the regions, the States and the Nation can be more fully realized, and greater satisfaction can be derived from governmental development activity.

Accordingly, we are discussing in this section the problems of organization and procedures for advance planning on a regional basis.

5. Levels of Planning and the Place of Regional Planning

At the present time a fairly elaborate structure exists for the advance planning of government development activity at several levels of government. Many cities and an increasing number of counties have organized planning boards and staffs which report on coordinate advance plans, as an aid to the city and county governments. These boards sometimes also exercise semijudicial or semiadministrative functions, for example in passing upon the design of land subdivisions. It is conceivable that each city (or group of towns in a metropolitan area) and each county (or group of counties) will eventually have a planning arm. City councils and county supervisors, availing themselves of the degree of autonomy granted to them by the State, adopt policies and programs, adopt city or county plans as a guide in certain important policies and programs.

All except two or three of the States now have State planning boards. These boards are new and their effectiveness varies widely. It is expected that in time they will be able to compose their State programs into comprehensive plans, gathering up the city and county plans and dovetailing them into the State plans, and that they will then have the composite State plans as a basis for coordination and adjustment in the national policies and programs. Metropolitan regional planning agencies serve to assist in the coordination and adjustment of the programs of the many governmental units engaged in development within a metropolitan area. These agencies deal with the peculiar problems of these specialized and extremely important areas of concentration. They may be considered to represent one phase of the transition to the organization of metropolitan government.

National development planning, while highly perfected in some of its separate segments, is just making a beginning as an enterprise in the preparation of coordinate, composite policies and programs. In this national development planning, the programs of cities, counties, metropolitan regions, and States must be recognized. As a matter of operating procedures, since the State planning boards must in any case have assembled and tied together these local plans, the national planning agencies may find it most convenient to deal with and through the State planning boards for purposes of coordination.

The present organization of development planning for the several levels of government might seem to

provide a plethora of planning agencies and planning staffs. However, as we have seen in the preceding chapters, two extremely important elements remain unrecognized in this structure of planning. First, we find that a large number of interstate, regional development enterprises require planning in a coordinate way by collaboration of agents of at least the Federal and the State Governments. And this coordinate planning of big interstate regional projects should be done in the field, on the ground, close to the problems and attitudes of the people, and in close working relationship with the official and unofficial agencies at interest. Decentralized, regional State-Federal planning organization seems to be indicated by this consideration. Second, we find that the magnificent potentialities of this country may be more completely utilized by drawing upon the energies and resources of the great regions which generally transcend State boundaries and which we as a people are now beginning to discover. The organization of field staffs for both of these aspects of regional planning seems to be worth a trial. Such regional planning offices should constitute a more realistic and at the same time a more convenient point of liaison between the Federal and the State planning staff work, as already appears to be the case with the New England and the Pacific Northwest regional planning projects. Thus, the type of regional planning here contemplated does not now constitute an entirely new level of planning, nor even an additional element in the structure of planning, but rather a facility for strengthening and making more realistic and useful, the planning work at the State and Federal levels. Furthermore, it sets an important phase of coordinate planning in an apparently reasonable relationship to the areal distribution of the development problems and enterprises and on a convenient working basis with the State and Federal Governments, while at the same time removing it from bureaucratic frustrations at Washington and the sometimes provincial attitudes of the State capitals. The place which regional planning may take in the national and local planning structure seems logical, but it is again evident here that the success of regional planning is in no small measure dependent upon effective coordinate planning by the Federal and the State planning agencies.

6. Regional Planning Centers

(a) *Regions or centers.*—It has been pointed out that no single set of definitely bounded composite regions can now be offered with assurance that they will be found reasonably acceptable and satisfactory. It may be some time before agreement can be reached on a division of the country into such regions. The

analyses presented in this report and the processes involved in the regional planning here contemplated should help in their final determination.

Meanwhile, the problems of coordinate planning for the regional development enterprises of government press for solution. The problems narrow down to the matter of devising arrangements for coordination and staff reporting for indefinitely bounded regions: in fact, for varying regions and functional areas. The composite regions cannot and perhaps need not now be rigidly delineated. For the time being the functional areas necessarily vary enormously. For example, the area for water planning (usually a major drainage basin) is likely to cut clear across a great land-use region and at the same time to be quite different from the power distribution region, the transportation region, the industrial region, and so on. How can the Federal and State governments establish machinery for systematic coordinate planning and staff reporting on this basis of flexible regions and varying functional planning areas?

In this situation we may consider an arrangement which involves an unfamiliar concept in planning work. Instead of definitely delineated regions for planning we offer for consideration the organization of centers of regional planning and coordination in which State and Federal staff people may collaborate in planning for the development enterprises which are interstate, but not Nation-wide in their immediate significance. It is conceived that at a number of centers throughout the country, as the need arises and as the necessary arrangements can be effectively made, regional planning offices may be established and recognized, and that through the use of these centers a flexible but systematic procedure for coordinate planning may be instituted. The number of such centers might range between 10 and 20. Factors to be considered in selecting them are discussed below.

(b) *Functions of regional planning centers.*—The staff set up at a regional planning center would undertake, by collaboration between State and Federal representatives in the organization, to assist the State and Federal Governments in the formulation of sound policies and programs on regional development matters. Reviews, reports, and recommendations would flow from the staff, through a central figure or board, to the capitals and to the field agencies. The reports could be used in the capitals in the formulation of programs and authorizations, and they could be used in the field in connection with the discretionary powers delegated to field agents by the capitals. They would facilitate the integration of Federal, State and local programs on a varying, flexible regional basis. They could discover conflicts, contradictions, and unwise priorities, and fa-

cilitate their reconciliation. They could study the regional territory and derive an overall view of its problems and potentialities and use this material as a part of the background for planning. They could fill in gaps which inevitably occur in piecemeal, uncoordinated programming. They could tap and reflect the important nontechnical attitudes, the "climate of opinion", in the regional territory, and adjust the plans accordingly. They could examine the policies and trends in nongovernmental enterprise and aid in effecting adjustments between them and the work of the governments. They could review the development programs against the whole regional background of social and economic processes and changes. They could facilitate the preparation of integrated regional development plans. They could serve as field offices of the central Federal planning agency and, on regional matters, as field offices also of the State planning boards. They would deal with development policies, programs, projects, sequence of development and priorities, allocation of costs and revenues, and problems of establishing new execution agencies.

These are wide and important functions, now handled more or less unsystematically at a great many different points, or largely neglected. The suggested machinery is justified only if the problems are adjudged sufficiently critical and pressing, and if the center of regional planning is found to offer a good chance of solving those problems.

The New England and Pacific Northwest Regional Planning Commissions are making a beginning on the exercise of the functions above described. They are discussed in chapters II and X, and certain modifications in their arrangements are there considered in the light of the matters raised in this section. While it is believed that no uniform arrangement can be applied to all regional planning centers which may be set up, the principles which seem to emerge from the present discussion of organization and procedures are applicable alike to existing and to prospective centers.

(c) *Organization.*—While organization of such regional planning centers as are established will undoubtedly vary somewhat in the various situations, the arrangement which seems on first examination to meet the requirements most appropriately, may be outlined as follows.

First we may consider the possibility of a regional planning board made up of State planning board chairmen and of Federal representation. The chairmen or executive officers of the State planning boards would seem to bring the proper State representation provided the State planning boards are effective agencies for coordinate planning in the States. Such effectiveness cannot be anticipated short of at least a few years of

additional experience. Meanwhile, such representation may still be drawn in, since it will help to build up State planning and prepare the way for more effective regional planning. In the interval it may be sensible to head up the regional planning through a chairman and director, as described below, with the State planning board representatives acting in an advisory capacity.

A great many Federal bureaus and independent agencies may be involved in the regional planning work—too many for each to be represented on the regional planning board. Two alternatives may be considered. Representation might be named from each of several Federal departments and the most important independent agencies; Interior, Agriculture, War, etc.² Or citizen members might be named by the President to sit on the board. In either event, the Federal as well as the State representatives should probably participate in the determinations made and in the reports drafted. Conversely, as a matter of focusing responsibility and producing clear-cut recommendations, and also to act in the capacity of chairman, a director might be named by the President or the central Federal planning board, with the approval of the governors of the States in that region.

Advisory technical committees have been found useful in New England and the Pacific Northwest and, variously organized, will probably form part of a normal regional planning organization.

Likewise, a committee, or several committees of citizens or laymen, may be utilized to bring in the citizen point of view and to disseminate the findings of the regional planning office.

For staff arrangements the following elements may be visualized. A regional planning consultant or a regional planner on salary, corresponding on the regional level to the present State planning consultants, would be a nucleus of the staff, responsible primarily to the director and the board, and available on call for special reports to Washington or to the State capitals. Assisting him would be technicians in the major problems such as, land, water, transport, recreation, etc. These staff assistants might be recruited largely from existing agencies operating in the region. Finally, from time to time, the regular staff could be supplemented by a combination of Federal and State specialists, organized and assigned to study and report on problems which require an unusually high degree of special technical competence.

We cannot go farther in this theoretical analysis of the organization possibilities. Again, it is evident that

only where they are needed and can be used should such organizations be established. Further, if any number of such regional planning offices are established, there will be a dearth of trained, experienced men to staff them. The personnel problem is one limitation upon the rapidity with which this type of regional planning can expand.

(d) *Procedures.*—The procedures involved in studying, coordinating, reporting, etc., seem fairly obvious except at points where some difference of opinion arises which cannot be readily ironed out in the councils of the regional planning center. Let us assume that an hitherto unrecognized conflict is discovered through the collaboration in the regional planning office. The United States Corps of Engineers, the United States Biological Survey, and a State highway department are proposing enterprises which are found to be definitely in conflict each with the others. Issues of considerable public importance are involved. Through the staff work and around the council table of the regional planning board no common agreement can be reached for reporting to the central offices and to the field offices of the agencies concerned. How can "coordination" be effected?

In this consideration we must remember that neither the Congress nor the President nor the other chief Federal executives are or can be bound by any determination of the regional planning board or the director. Nor is the State legislature or the governor of the State bound by such determinations. If the difficulty can be straightened out in the regional planning office, the reconciliation would probably be recognized and adopted in the capitals and in the field. But, failing this, the Congress, the President, or the chiefs of the Federal agencies will have to decide for the Federal Government, and the legislature or governor or, in the case cited, the State highway chief will have to decide for the State government. It is clear, then, that reports describing and reviewing the whole matter must flow to these headquarters. The final and presumably most authoritative report would be that from the director, sent through the national planning agency to the Federal officers, and through the State planning board to the State officers. Such a situation might be typical of those in which the "flying squadron" of special technical experts would be called in.

Here we find critical questions arising with reference to the authority and responsibility vested in each figure at the regional planning center, in the group as a whole, and particularly in the director. Such procedures sound cumbersome and slow. They are, in fact, precisely the same as those now followed, except that at present they are not systematized. As matters now stand, the conflict might not have been discovered

² The Pope bill for a Columbia Valley Authority contemplates such an arrangement.

until after the work was well under way. It might then have been corrected only at great cost and embarrassment. If discovered, there would now be no machinery for review, staff reporting, reconciliation so far as possible, and the presentation of all sides of the case in a detached and technically competent manner, and by men on the ground, close to the scene but responsible to Washington and to the State governments.

Bureau agents often prefer to fight out their own battles and to take their chances on failure to coordinate. Some may be expected to resist the process here described. It is this very fact that accounts for much of the confusion, waste, and public dissatisfaction in the uncoordinated formulation of governmental development programs. The Congress and the President, the governors and the legislatures, are ultimately responsible. It is to them, in making decisions and in building up sound programs, that the regional planning work should be finally most useful.

(e) *Selection of centers.*—Out of all the considerations entering into the problems of organizing for regional planning, certain criteria emerge as most important in the selection of the points at which regional planning offices may be established. The actual selection will probably result from a combination of fortuitous circumstance and rational application of the criteria. When the State and Federal and unofficial groups in a certain section of the country decide that the time is ripe to begin regional planning, assistance can be given in determining the generalized region with which the planning may be identified, the States to be represented, the functions and functional areas to be treated in the coordinate planning, and the selection of the location for the headquarters, based upon the preceding factors, upon accessibility and convenience, and upon the acceptability of the center for collaborative planning. If the regional planning be initiated in Washington, the same criteria may be applied.

Preferably, of course, a selection would be made in advance for all prospective regional planning centers. In that way the advance division of area and of functions to be dealt with would avoid the possibility of overlapping or of leaving gaps in the assignment of area and functions. Enough is known now to begin on this Nation-wide selection of centers, at least in a tentative way. Additional work is necessary in analyzing and mapping the functional areas, the distribution of problems and projects, the relationship to field offices, State capitols, and universities and State colleges, and in checking tentative selections with the Federal and State agencies and executives.

In the light of these considerations, the technical committee has hesitated to make at this time a final selection of centers for regional planning. At the urgent request of the advisory committee, however, the technical committee on regional planning has set forth its views, as follows:

We were reluctant to include formal recommendations in our report, quite apart from the difficulty of reaching final agreement among ourselves, concerning all of the regions with their centers which might be provided in any theoretically perfect system. We believe that any selection must be based in part upon careful consultation with members of the staff of the National Resources Committee who have had experience in relating Federal planning to that of the States, for example, and with the staffs of various Federal bureaus which have had similar relationships in the administration of their own functions. To issue even in a most tentative form specific proposals would, we believe, create an atmosphere of opposition and resentment on the part of those who already have other preferences, whereas it would be preferable at least to attempt a meeting of minds among those who, in the last analysis, would be the ones to use and obtain benefit from any regional organization and procedure which might be established.

Within our own committee there is agreement upon the selection of several centers serving regions based upon the grouping of planning problems, and uncertainty concerning the choice of a small number. Since in any event, the National Resources Committee would be prepared to experiment with only a few centers at the beginning, we presume, it might be helpful to you to have our suggestions concerning those centers upon which we are agreed, with a statement of the criteria which we believe should be employed in determining in operation and on the ground their adequacy for the purpose outlined in our report.

In part IV of the report there is an extensive discussion of the geographic factors which obtrude themselves upon planning of national development, and an analysis of the way in which a break-down of planning problems into their areal extent reveals a significant clustering in such manner as to create what our geographer has designated as "composite factor planning regions" or "multifactor planning regions." The basic elements whose analysis produces this regionalizing include: climate, soil, relief, drainage, natural vegetation, fauna, principal mineral resources, population density, metropolitan influence, manufacturing, agriculture, pastoral use, wholesale and retail trading areas, farm income, distribution of public relief, and voting habits. In preparing the resultant map, "particular weight was assigned to the factor of land-use problems because of its preeminent significance in underlying any possible planning program. Some consideration was also paid to the insistence of that general sectional consciousness which is apparent in general thinking and reference." (See figs. 28D and 29.)

In part V of the report, stress is laid upon the complementary criterion, namely, the effective relating of the work of all levels of government, national, interstate, State, and local, to a comprehensive study of and attack upon the problems which thus emerge regionally. It is clear that this requires careful consideration of the work done both at Washington and in the district offices of the Bureaus concerned

in a major way with the planning problems that fall within the review of the National Resources Committee, and in turn the further consideration of the most effective relationship between them and the State capitals and other local centers which are used in the planning which may be related to the problems of the multifactor planning region. (See fig. 20.)

Clearly, to follow the criterion of multiple factors to an extreme may give too great a divorce of the planning center from the every-day work of many Government offices, while to follow the other criterion of present governmental districting may only serve to confirm governments in their divorce from a comprehensive view and treatment of the regionalism of the problems which confront them. There is a large area within which substantial agreement, without essential injustice to either general position, may be achieved through good will and patience and a careful reconnaissance and exploration.

In any event we are agreed that the application of the above criteria points to the selection of the following cities as centers, at which regional planning of national development may usefully be attempted: Boston (New England), New York (Eastern), Knoxville (Ozark-Appalachian), Atlanta (Southern), New Orleans (Gulf Coast), Chicago (Midwestern), Portland (Pacific Northwest), San Francisco (Pacific Southwest), and Denver. There is uncertainty among us as to certain other possible choices. The Denver office might serve the Intermountain region or the Great Plains region or both; this decision would obviously be affected by the possible selection of Salt Lake City in the Intermountain region, and of Bismarck, Omaha, or some other city for a center for the Great Plains. Again, Nashville has been suggested as a possible center in place of Knoxville for the Appalachian-Ozark Region, with Cincinnati for an Ohio Valley development area. We have reached no decision as to whether St. Paul, Duluth, or some other city would best serve as a center for the Great Lakes forest and cut-over region. But on the cities listed first above we did reach agreement. Out of the further analysis of functional and project areas and related social and economic factors, and of conferences with the national and State officials and others concerned, we believe that further selections of additional centers may usefully be made as may be desirable, the total number probably not exceeding 16 or 18 at the most.

We would add that much depends upon what emphasis is placed, in making these selections, upon the factor of constitutional authority for the power to implement plans and upon the national policy generally. Thus, the extent of authority which the national Government can exercise concerning navigable streams might distort a regional scheme in one direction—namely, an emphasis on river systems—while an emphasis on the use of credits and other devices for encouraging a public housing policy might similarly distort it in another, probably an emphasis on metropolitan areas. We cite these as illustrative only.

(f) *Assignment of functions and areas.*—It should be noted here that every center would probably not deal with all of the types of development enterprises involved in regional planning. A basic principle of the operation is that from any one center a whole functional area and not only part of such an area, should be dealt with. Accordingly, Boston might deal with the whole of the northeastern forest area which extends from Maine across northern New York State. Port-

land, Oreg., might deal with the whole of the northwestern coast forest area from Washington into California. The land use region handled in Denver might cut deeply into the upper Missouri water use region treated in the first instance from Omaha. Confusion will result unless the assignment of function and area can be worked out in advance and agreed upon. Likewise the operating procedures for collaboration between centers which deal with overlapping functions and areas must be carefully designed. The whole process of assigning functions and areas is wrapped up with the determination of the centers themselves.

(g) *Assignment of States.*—When a regional planning office is established, determination must be made of the States to be represented there. Those lying mainly in the generalized region, and in addition those into which some important functional area extends, would naturally demand representation and participation in the regional planning work. It is not feasible for a State government to assign the chairman of its State planning board, for example, as a representative of only part of the State. It is the State government which is represented, even if it be for the planning of only certain enterprises which lie over only a portion of the State's area.

It is evident that on this basis many States will require representation in more than one regional planning center. For example, as cited in chapter II, Montana might have full representation and full participation at Portland and also at a northern Great Plains regional planning center. Connecticut, likewise, might retain its part in the New England work centering in Boston and at the same time participate at a regional planning center for an eastern region. A great many of the States may take part in more than one regional planning project.

(h) *Simplification of Federal districts.*—As shown in figure 4, there is already a considerable gathering of Federal district offices at a number of central points throughout the country. It is not impossible that, when regional planning centers have been established, an even greater clustering of these offices would follow. Particularly it would be a great advantage if many of the regional headquarters of those Federal agencies dealing with the development enterprises could be located at the same points as the regional planning offices. This arrangement does not necessarily imply a sudden and complete revision of the district boundaries, although some revision would probably ensue. The important thing is to get the offices together for convenience in the collaborative work so essential to obviate confusion and conflict.

7. Eventually—Regional Plans

The establishment and operation of the kind of regional planning discussed here involves many difficulties, and it probably faces many frustrations. However, in New England and the Pacific Northwest some degree of success has already been achieved, in spite of the obscurities and difficulties. Succeeding projects may have smoother sailing. In any event there seems to be a recognized and urgent need for the kind of co-ordinate planning which requires the establishment of regional planning projects. They will probably be demanded, and there is some danger that they may be set up without guidance and without appropriate spon-

sorship. It seems wise to recognize the demand as it arises and to give a trial to the best arrangements that can be devised in each case.

It may not be too much to anticipate that the growth of regional planning will lead to the discovery of the regions, lead to greater regional expression and regional culture, lead to wiser and more useful development, lead to the emergence of true regional plans constituting coordinate parts of national programs. Meanwhile, as centers of collaborative planning work and as centers of information, the regional planning offices can be sources of stimulation to the creative forces of the regions and of the Nation.

CHAPTER XIX. SUMMARY

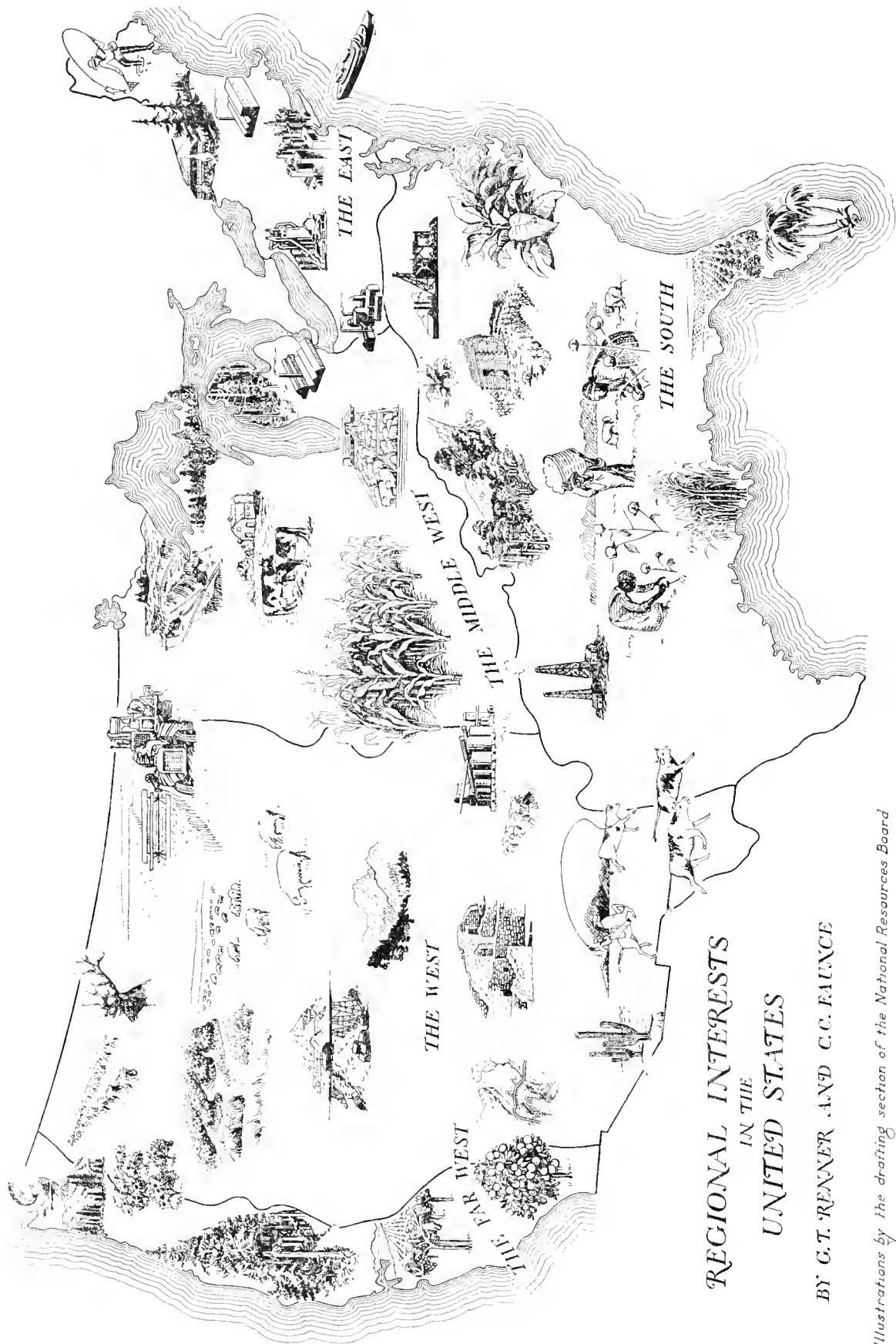
The growth or decline of a regional consciousness cannot be predicted with exactness. The contributing influences are subtle, varied, and fluctuating. They include: The relation of people to and their use of resources; the changes in knowledge and techniques which shift the value and importance of resources and occupations; changes in communication which redirect the relationship of one community to another; the rivalry of cities in seeking to attach wider areas to their spheres of influence, and the strategy of competing economic interests; the stimulation of regional consciousness by the historian, the artist, the novelist and poet, the architect, and the educator; and the channeling of political action and careers by the political system with its parties and leaders. These are only some of the influences which vary in their relative importance from time to time and from place to place. We have seen such influences reflected in problems so urgent that they force experiments in political organization and administration. We cannot foresee what precise form such pressure to express regional needs will take. A more conscious effort should be made to reflect these needs, and the ideas developed within the region as to how those needs should be met, in formulating and executing national policies. To say this is only to reiterate a doctrine fundamental in American development and inherent in Federal systems.

This is the ultimate basis for encouraging in the field the advance planning of national policies in such a way as will reflect emerging regional policies also, and provide better integrated and more economical means for executing them through all the levels of government. That there will continue to be sharp conflicts over the policies, we have no doubt; such conflicts exist now, and have always been present throughout our history. But they are the more serious and harmful because there has been lacking a careful and sympathetic exploration in advance of the fundamental factors, physical as well as constitutional, present in a major problem that involves more than one State, and both the State and the National Governments. We have, therefore, emphasized here the need for obtaining a comprehensive view of the development of and coordination of governments in a region, rather than the details of organization and procedure which may be modified as experience teaches.

But we would emphasize strongly that if the National Government is to participate in any such effort to develop comprehensive regional programs as a part of its own task of formulating national policy, it must be eager to coordinate the activities of its own agencies. Good administration requires not only a nice articulation of the constitutional powers of the National Government with those of the States; it equally requires a similar care in coordinating the work of one bureau with another within departments and between departments. Careful advance planning is necessary in order to prevent costly antagonism; this is particularly true when the problem being attacked is regional, since, as we have seen, there are many factors involving numerous units of government which must be dealt with. Hence, regional devolution in planning procedure, while aimed primarily at enabling the Federal system to reflect more accurately and adequately the values present in the regional concept, suggests an improvement in the formulating of national policies which in itself is necessary for good administration. Authority and function are so distributed among the departments that they must cooperate both in formulating and in executing policies if a problem is to be attacked successfully. If this cooperation be not secured, distortion and maladjustment result.

If it be objected that any procedure which provides such coordination between the National and State Governments in their activities in a given region, adds further complexity to an already complex government, there is this to be remembered: A Federal system of government necessarily is complex; if one desire a Federal system of distributed powers, he must pay the price. That price is the establishing of means whereby the different parts, established to reflect politically the varying desires and interests of the constituent corporate members of the Federal Union, may cooperate with one another and with the whole in exercising their powers in such a way as to solve their problems. One does not, presumably, establish governments in order that they may be either simple or complex; one establishes them to help him solve his problems.

But this too should be remembered. Under any circumstances some sharing of authority and responsibility between the levels of government exists. Some efforts are now made to obtain integration in the exercise of these powers. Within the past few months, such efforts



Illustrations by the drafting section of the National Resources Board

FIGURE 29.

have been extended by Congress into the field, for example, of social insurance. The practical question is not, therefore, one of avoiding complexity, but of facilitating in every way possible the most effective functioning of a system which is by definition, being Federal, complex.

Nor should we forget the very heavy responsibility which is placed, in our Government, upon the President and his colleagues in the formulating of administrative policy. While one may say that he is exercising Federal power alone, the fact is that every exercise of such power has its impact at local points somewhere in the area of the United States. The stream dredged for interstate commerce by Federal authority and with Federal expenditure and agencies will vitally affect local communities; and the same point is true for a commodity program for potatoes or cotton, or the location of a Federal forest, park, or wildlife refuge. How, then, can the President and his advisers be enabled best to visualize this local impact of a Federal program? Reports indicating the future commitments of all the agencies concerned, and indicating priorities in construction, operation, and expenditure are as necessary for him as the data supplied by the Bureau of the Budget. This knowledge, indeed, underlies the budget; upon such information decisions for expenditure should be based.

If it be objected that no clear cut delineation of regions exists, or that if any does exist and is discoverable it will soon be obsolete because of social changes, it may be pointed out that this makes all the more important the continuous adjustment of the boundaries of any planning region to these social changes. The centers described in its previous section of the report should, indeed, be the first point at which shifts of this kind are noted and appraised. The selection of the centers and the extent of area with which they should be related should be based upon an analysis of the planning problems similar to that already undertaken in earlier investigations by the National Resources Committee and many other agencies, the grouping of problems by regions evidenced by these factors, and by consultation with staffs of Federal agencies responsible for dealing with these problems and the State officials. The objective to be emphasized is not the protection of the vested interests of a bureau or a unit of government, but an effort to see as a whole the problems which confront what appears to be an organic area with some self consciousness of needs and desires peculiar to it, and the attempt to work out an equally comprehensive view of the way in which these problems can best be attacked through the cooperation of all the authorities.

In the course of this search, through the analysis of planning problems, for any natural grouping or clustering of problems by area, it is possible that there may appear, for several Federal agencies, important advantages in attempting a coincidence of departmental districting. This possibility should be kept in mind in decentralizing planning procedure. We recognize, indeed, that the determination of the proper assignment of work within a bureau by districts may have no relevance for regional considerations other than convenience in office procedure, and that any arbitrary plan of establishing Federal districts without regard to the function performed by the bureau would be wasteful and undesirable. On the other hand, the more effective development of policies by bureaus whose work should be coordinated in the field operations and therefore in the preliminary preparation of policy as well, would clearly be assisted if there were a coincidence of field units with the problem areas. A more logical grouping of districts would stimulate a parallel coordination of functions among the local governments affected by common problem areas.

There should be included in any decentralized advance planning provisions which indicate the agencies to which construction and operation are to be assigned, and any new agencies which may be necessary. It is clear from an analysis of the reports which have been made to the National Resources Committee and published in the report of the National Resources Board of December 1934 that there is no single form of organization to be recommended for general adoption for the development program of a region. The kind of organization should be determined by (1) the functions which it is to perform, (2) the extent of the area over which it is to operate, and (3) the distribution of the constitutional authority from which it must derive its own authority to execute the functions assigned to it. While as a general rule the creation of new units is to be avoided to prevent duplication of governments with their resulting increased overhead administrative costs and complexity of spending and operating units, the objective of government, it may be repeated, is to solve the problems assigned to it. Our constitutional system is such that in order to accomplish certain purposes new organizations are necessary. This has been illustrated throughout this report.

There is a considerable armory of types of organization and procedure which may be drawn upon in establishing a unit for construction, operation, and further planning related to these functions. From the experience available, the most appropriate use of certain types of organization seems to us to emerge.

There are at present many agencies in the Federal Government through which single types of projects are carried out, and their special experience and accumulated skills within their respective fields in the operation of projects included in any comprehensive program for a region should be employed. Illustrative of these services are the Forest Service, the National Park Service, and many others. On the State level similar agencies are found in the highway departments and conservation departments.

However, in developing a regional program some projects may include several interdependent factors such as stream pollution, flood prevention, prevention of soil erosion, reforestation, and other closely interwoven functions, so concentrated in an area that the task of construction and operation should be assigned to a single unit which will either be entirely responsible for the major portion of construction and operation, or at least for scheduling and coordinating the activities of several Federal and State agencies in the area. Here the experience of the Tennessee Valley Authority illustrates the place for employing a Federal public authority cooperating with Federal services as well as State services.

Where the project is interstate in extent, but largely local in benefits, as illustrated by the Lake Champlain Bridge, and where the apportionment of constitutional power permits or requires, the interstate authority seems to us more satisfactory. This is particularly true where the costs can be liquidated by the charges made to the users.

It is possible that a third type of public corporate authority might be created under the joint ownership of both the National Government and those States concerned in regional projects affecting the owners. There are certain areas in which the developments which should be undertaken lie within a twilight zone between clear-cut national powers and State powers, yet in which the problem requires carefully articulated cooperation of all. This is true of a river system in which the Federal power over navigation for purposes of interstate commerce and State power over stream pollution and local planning require comprehensive exercise, and involve also joint cooperation in reforestation, the prevention of soil erosion, and land-use planning.

The dividing line between the best use of each type of organization is not clear cut. Organization is obviously dependent upon the extent of the functions which need to be performed in order to solve the problems, the resulting requirements of constitutional power, and the proper apportionment of cost in the light of benefits and financial resources.

We would stress the fact, however, that much more informal arrangements than the creation of new agencies may be adequate. It may be possible, through the agency of the regional planning commission and its encouragement, to implement certain proposals through the cooperation of two States, as New York and New Jersey cooperate in the administration of the Palisades Interstate Park. Most important of all is the arrangement of an agreed schedule of projects and priorities to be followed by the Federal and State agencies concerned in the advance planning of development for a region. Progress is obtained by fitting the annual program of each agency into its place in the total plan. The blocking up of public forest areas by the Federal Government and the State governments illustrates this.

If any new Federal or Federal-interstate authorities should be established in different regions, they should be given some responsible relationship to the department or agency at Washington which has the major responsibility for formulating the national policy relating to the function which the regional authority performs. This relationship should not be aimed at limiting the discretion conferred upon the operating authority by law, but should be designed to insure the consideration of the total national program relating to that particular function, and the part which each regional project plays in that national program.

The search for the best organization of construction and operation therefore leads us back to the fundamental importance of advance planning by all the governmental agencies concerned in the development of a region. It reinforces our view that such cooperation should be implemented and encouraged through a stage of decentralized planning, in order to avoid wasteful commitments by one agency because its program does not utilize a possible support from other agencies. It would enable the President and his associates to visualize more clearly what might be accomplished, in a given region, without establishing new organizations, and where any new organizations could function most effectively were they to be authorized.

One consideration which affects every phase of the problem of national and regional development is the importance of personnel. That importance is decisive. Such terms as "coordination" and "planning" have no meaning unless the public official is encouraged by training and procedure to see his individual task, and that of the office in which he is employed, in its relation to the larger problems of policy and program. We believe that such encouragement would be given by focusing attention upon the development problems of a region as a whole and the relation of the region to the

Nation. In this way the relation of one department to another, and of different levels of government to each other, would be clarified. There is today much discussion of the training and recruitment of public-service personnel. Much of that training must be secured after admission to the service and on the job; it should be, in fact, continuous. The atmosphere in which the work of the office is conducted is important. If the

emphasis is too narrow, too confined to the vested interest of one small part of the work of government, the joint effort, which we have seen is almost always required for successful attack upon our problems, cannot be made effectively. Improved means for facilitating a more comprehensive and orderly development program have their place also in the solution of personnel problems.

APPENDIX

Maps Showing Federal Administration Regions

1. *Treasury Department:*

Bureau of Customs:

- 30a. Districts.
- 30b. Agency districts.
- 30c. Comptrollers districts.

Bureau of Internal Revenue:

- 30d. Collection districts.
- 30e. Special agents division.
- 30f. Supervisors of accounts and collections: Divisions.
- 31a. Alcohol-tax unit: Districts.
- 31b. Income-tax unit: Field divisions.

Bureau of the Mint:

- 31c. Districts.

Bureau of Narcotics:

- 31d. Districts.

Division of Procurement:

- 31e. Public Works Branch: Districts.

Secret Service Division:

- 31f. Districts.

United States Coast Guard:

- 32a. Areas, divisions, and districts.
- 32b. Recruiting stations.

2. *War Department:*

- 32c. Corps areas.

- 32d. Procurement zones.

Air Corps:

- 32e. Procurement districts.

Chemical Warfare Service:

- 32f. Procurement districts.

Corps of Engineers:

- 33a. Power zones and districts.
- 33b. Procurement districts.
- 33c. River and harbor divisions.

Medical Department:

- 33d. Procurement districts.

Ordnance Department:

- 33e. Procurement districts.

Quartermaster Corps:

- 33f. Procurement districts.

Signal Corps:

- 34a. Procurement districts.

3. *Department of Justice:*

- 34b. United States district attorneys (and district courts).

Bureau of Prisons:

- 34c. Federal penitentiaries.

Division of Investigation:

- 34d. Field office districts.

4. *Post Office Department:*

- 34e. Central accounting post offices.

- 34f. Inspection districts.

- 35a. Supply offices.

Railway Mail Service:

- 35b. Divisions.

5. *Navy Department:*

- 35c. Naval districts.

- 35d. Naval material inspection districts.

- 35e. Recruiting divisions and districts.

Marine Corps:

- 35f. Recruiting divisions.

Supply Corps:

- 36a. General inspectors.

6. *Interior Department:*

Bureau of Mines:

- 36b. Economics branch: Field offices.

- 36c. Safety districts.

Bureau of Reclamation:

- 36d. Field attorney's offices.

Division of Investigation:

- 36e. Field divisions.

- 36f. Petroleum code investigation districts.

- 37a. P. W. A. investigation regions.

General Land Office:

- 37b. Cadastral engineering districts.

- 37c. District land offices.

National Park Service:

- 37d. State park division: Regions.

Office of Education:

- 37e. National vocational education regions.

6. *Interior Department—Continued.*

United States Geological Survey:

Conservation branch:

- 37f. Oil and gas leasing division:
Districts and subdistricts.

38a. Topographic branch: Divisions.

Water Resources Branch:

- 38b. Areas for reporting on surface water supply.
- 38c. Districts.

7. *Department of Agriculture:*

Agricultural Adjustment Administration:

- 38d. Commodities purchase section: Agricultural drought relief.
- 38e. Cotton production section.
- 38f. Program Planning Division: Land policy section: Regions.

Bureau of Agricultural Economics:

Federal grain supervision:

- 39a. Districts.

Hay, feed, and seed section:

- 39b. Seed reporting service: Divisions.
- 39c. Seed verification districts.

Bureau of Agricultural Engineering:

- 39d. Irrigation and drainage investigations.

Bureau of Animal Industry:

- 39e. Field inspection divisions.
- 39f. Meat inspection laboratories.
- Division of tick eradication and special diseases:
 - 40a. Hog cholera control field station areas.
 - 40b. Tick eradication field station areas.
 - 40c. Tuberculosis eradication division: Field stations.

Bureau of Biological Survey:

- 40d. Game management regions.

Bureau of Chemistry and Soils:

- 40e. Soil survey districts.

Bureau of Public Roads:

- 40f. Districts.

Extension Service:

- 41a. Sections.

Food and Drug Administration:

- 41b. Districts and stations.

Forest Service:

- 41c. Regions.

Weather Bureau:

- 41d. Forecast districts and offshore marine forecast zones.

8. *Department of Commerce:*

Bureau of Air Commerce:

- 41e. Inspection districts.
- 41f. Maintenance districts.

Bureau of the Census:

- 42a. Geographic divisions.

Bureau of Foreign and Domestic Commerce:

- 42b. District office territories.

Bureau of Navigation and Steamboat Inspection:

- 42c. Supervising and local inspection districts.

Lighthouse Service:

- 42d. Districts.

U. S. Shipping Board Merchant Fleet Corporation:

- 42e. Districts.

9. *Department of Labor:*

Immigration and Naturalization Service:

- 42f. Districts.

10. *Independent Establishments:*

Civil Service Commission:

- 43a. Districts.

Farm Credit Administration:

- 43b. Districts.

- 43c. Emergency crop and seed loan offices.

Federal Communications Commission:

- 43d. Inspection districts.

Federal Coordinator of Transportation:

- 43e. Regions.

Federal Emergency Relief Administration:

- 43f. Regions.

Federal Home Loan Bank Board:

- 44a. Regions.

Federal Housing Administration:

- 44b. Regions, States, and districts.

Federal Power Commission:

- 44c. National power survey: Zones.

Federal Reserve Board:

- 44d. Districts.

Home Owner's Loan Corporation:

- 44e. Regions.

Interstate Commerce Commission:

- 44f. Geographical grouping of railways.
- 45a. Origin and destination traffic regions.
- 45b. Bureau of accounts: Branch office territories.
- 45c. Bureau of locomotive inspection: Inspection districts.
- 45d. Bureau of safety: Safety-appliance groups.

10. *Independent Establishments*—Continued.

National Labor Relations Board:

45e. Regions.

National Recovery Administration:

45f. Compliance division: Regions and field offices.

National Resources Committee:

46a. Planning districts.

Public Works Administration (F. E. A. P. W.):

46b. State engineer inspectors: Districts.

46c. Finance division: Sections

46d. Office of chief accountant: District audit areas.

Reconstruction Finance Corporation:

46e. Loan agencies.

10. *Independent Establishments*—Continued.

Resettlement Administration:

46f. Regions.

Securities and Exchange Commission:

47a. Regional supervisors' zones.

United States Employees' Compensation Commission:

47b. Compensation districts.

Veterans' Administration:

47c. Diagnostic centers.

47d. Regional offices.

47e. Supply depots.

Works Progress Administration:

47f. Regions and Districts.

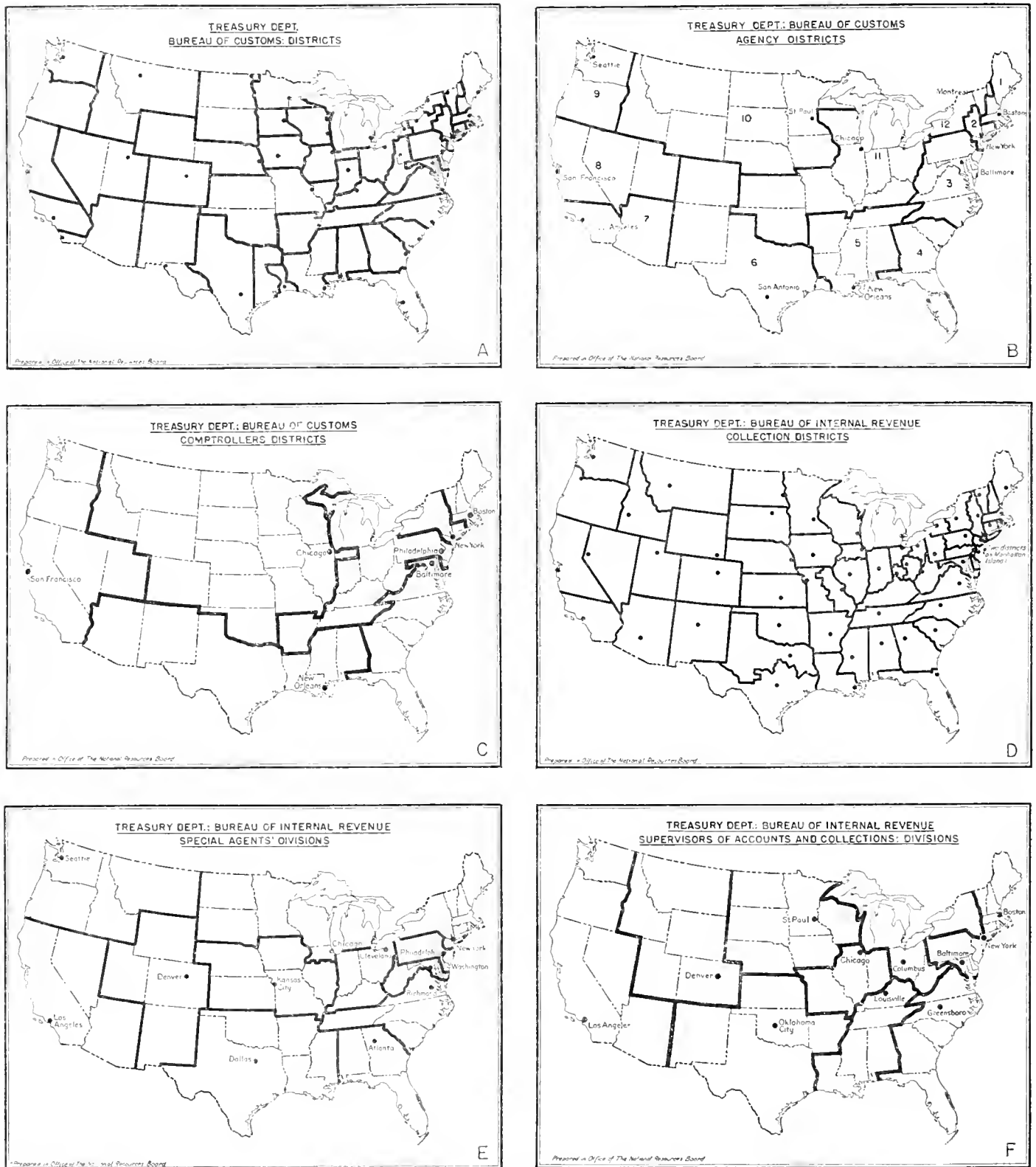


FIGURE 30.

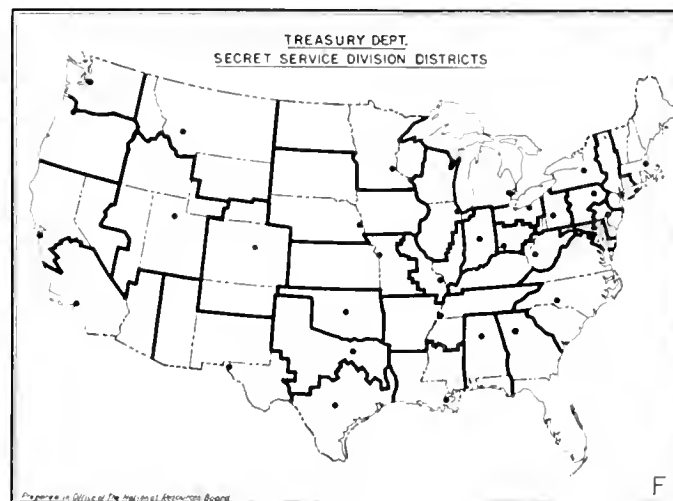
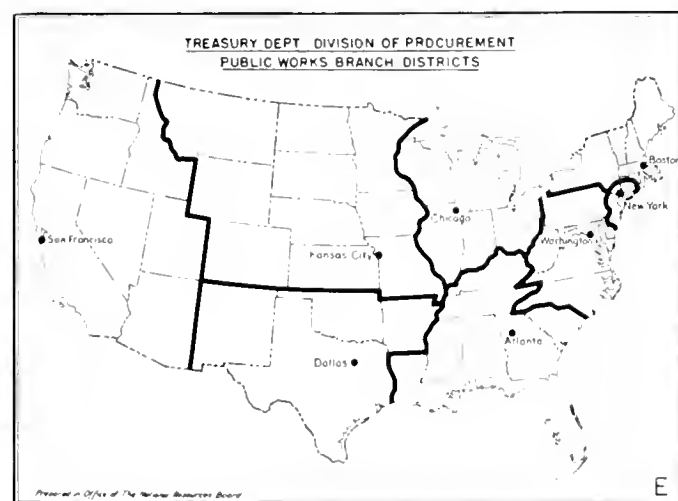
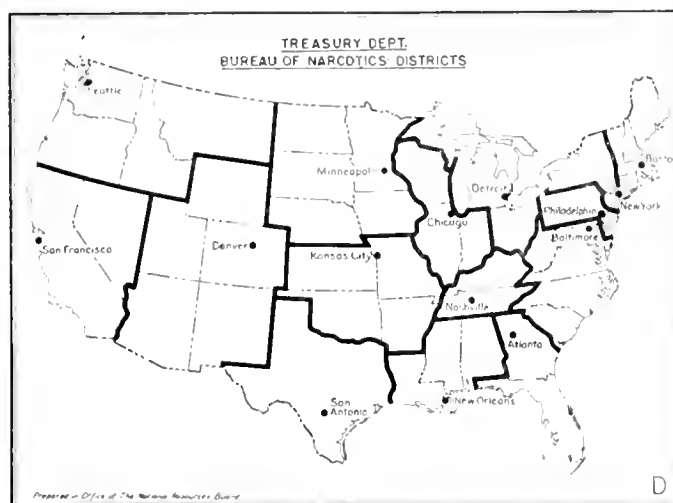
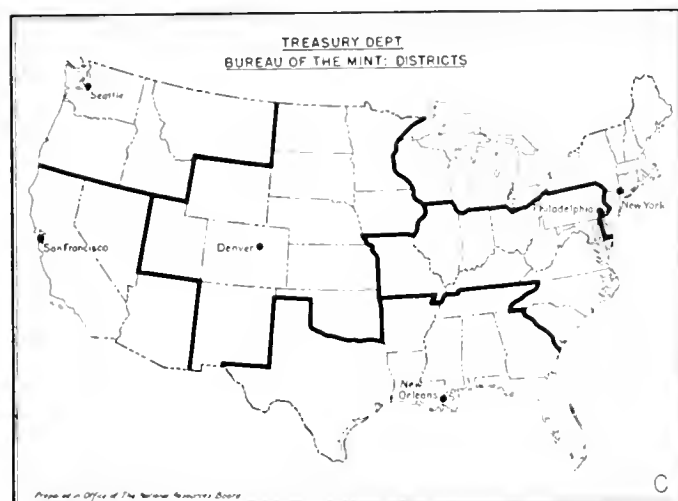
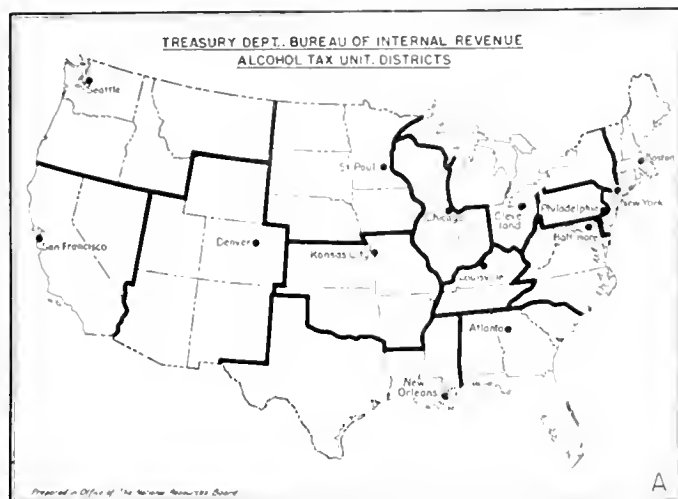


FIGURE 31.

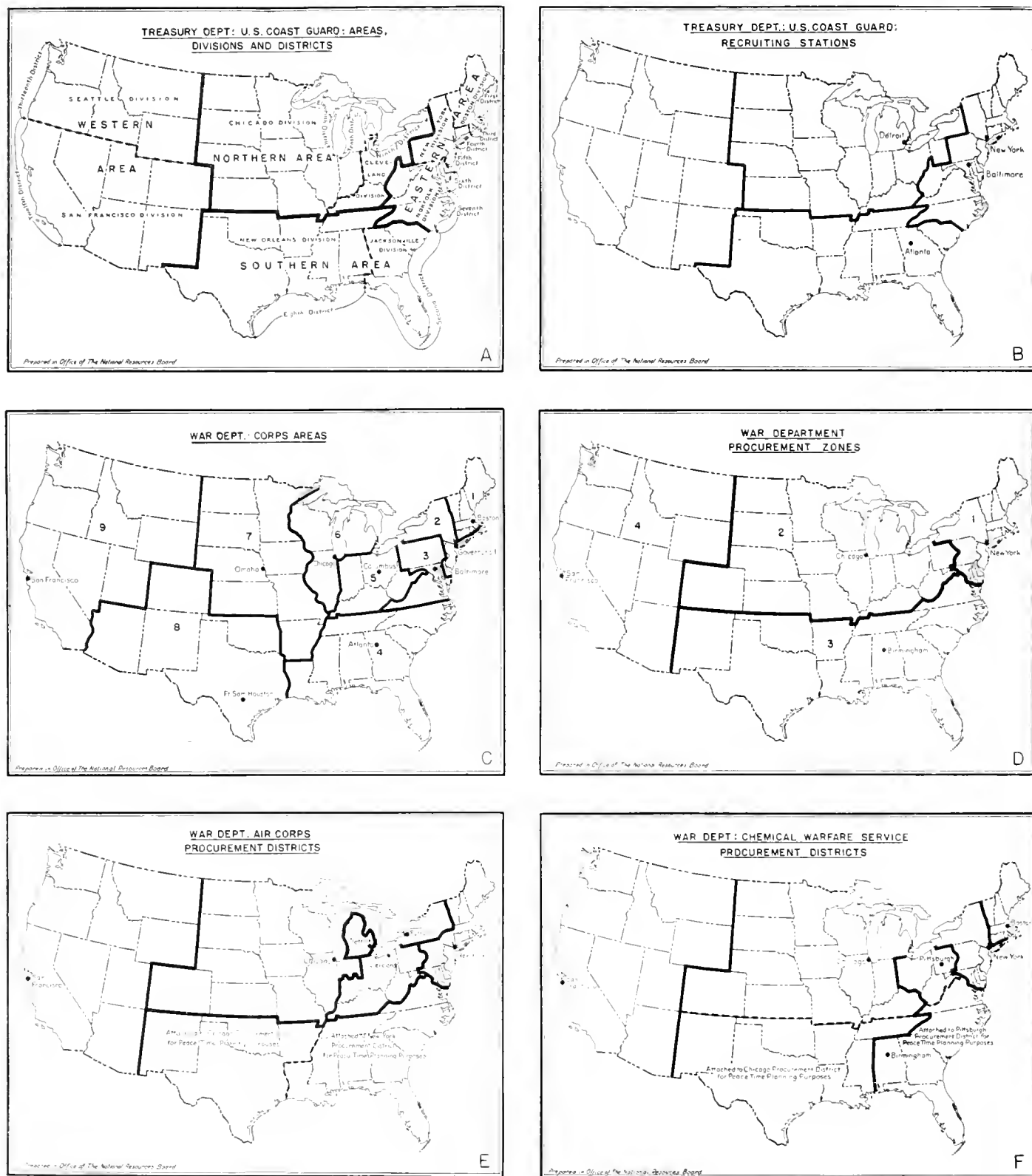


FIGURE 32.

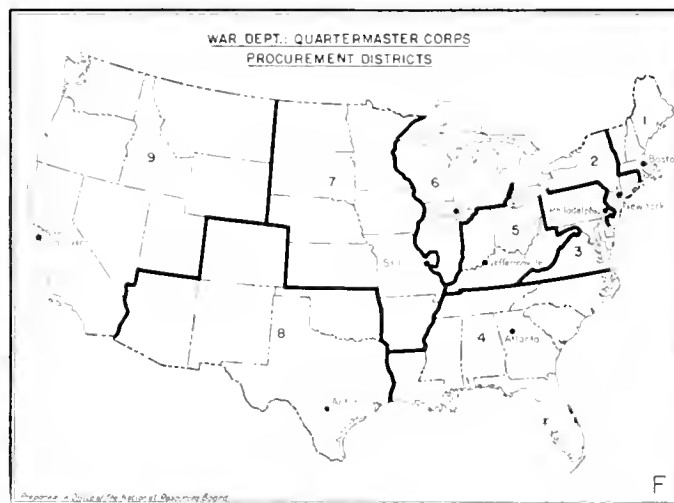
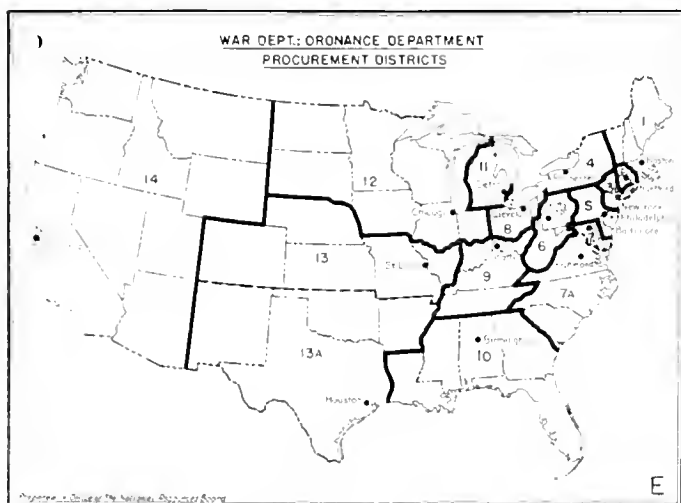
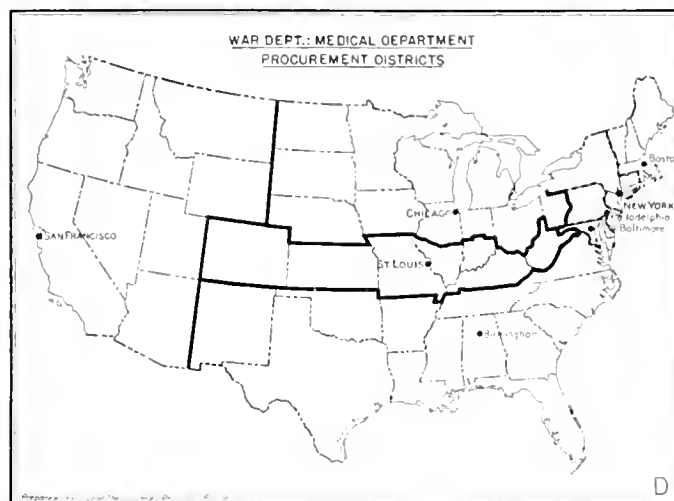
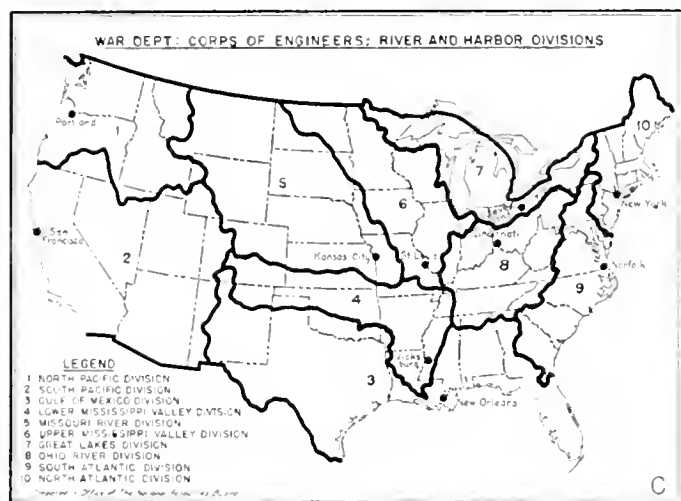
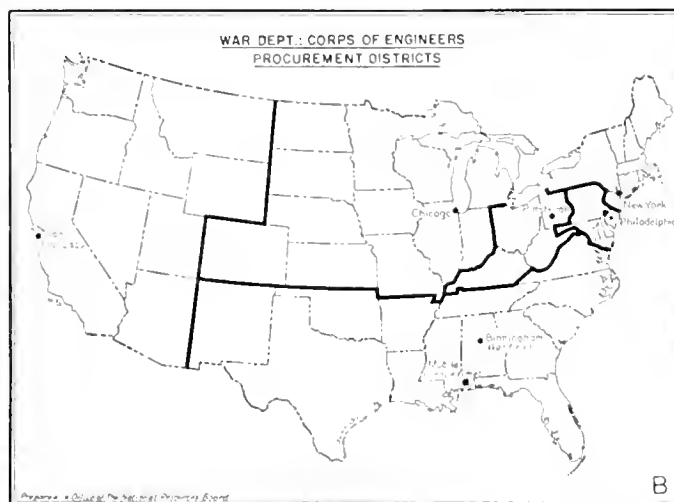
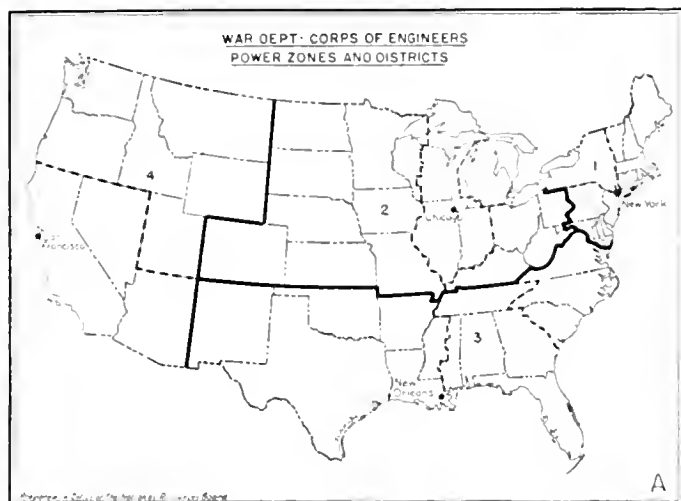


FIGURE 33.

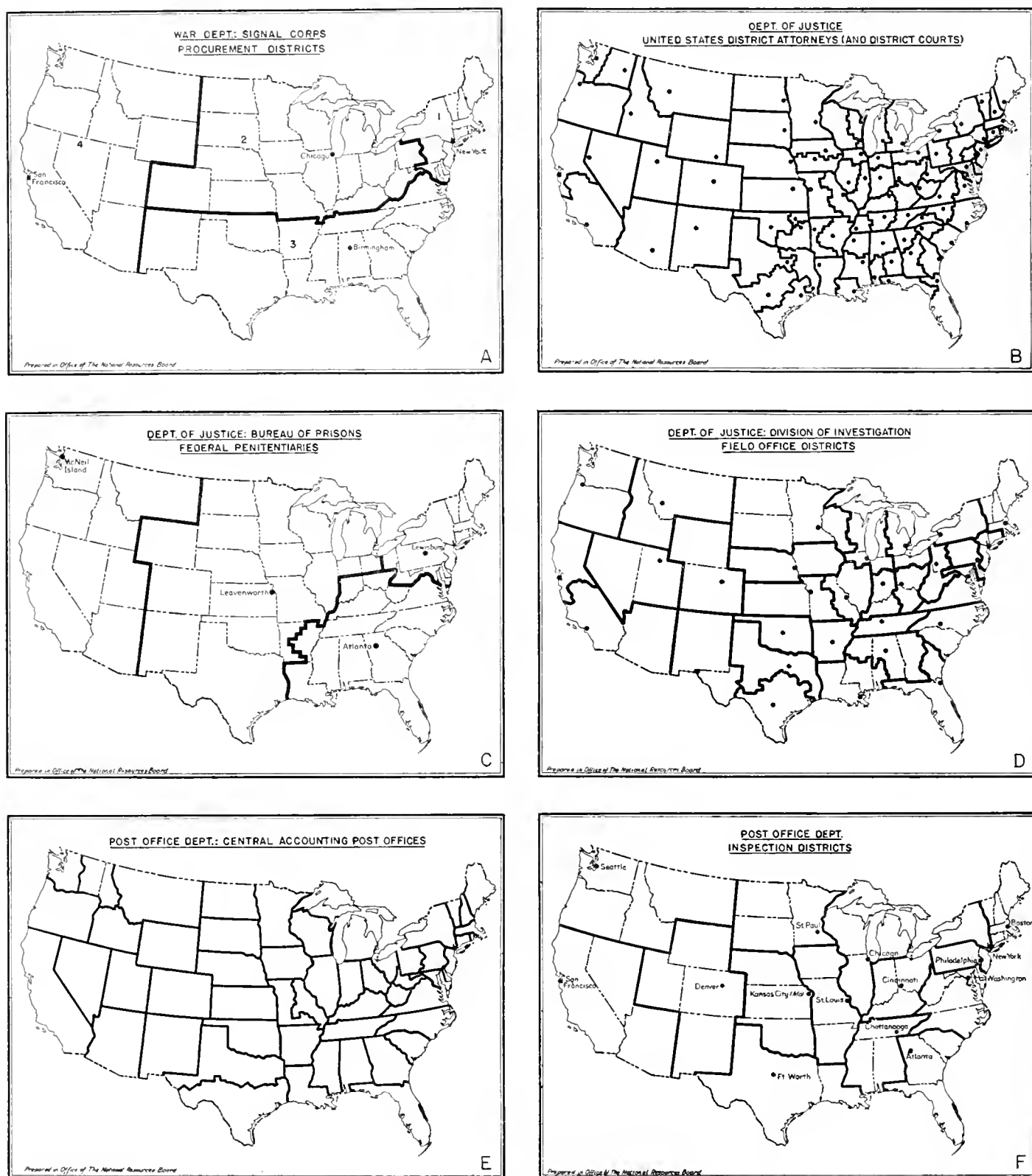


FIGURE 34.

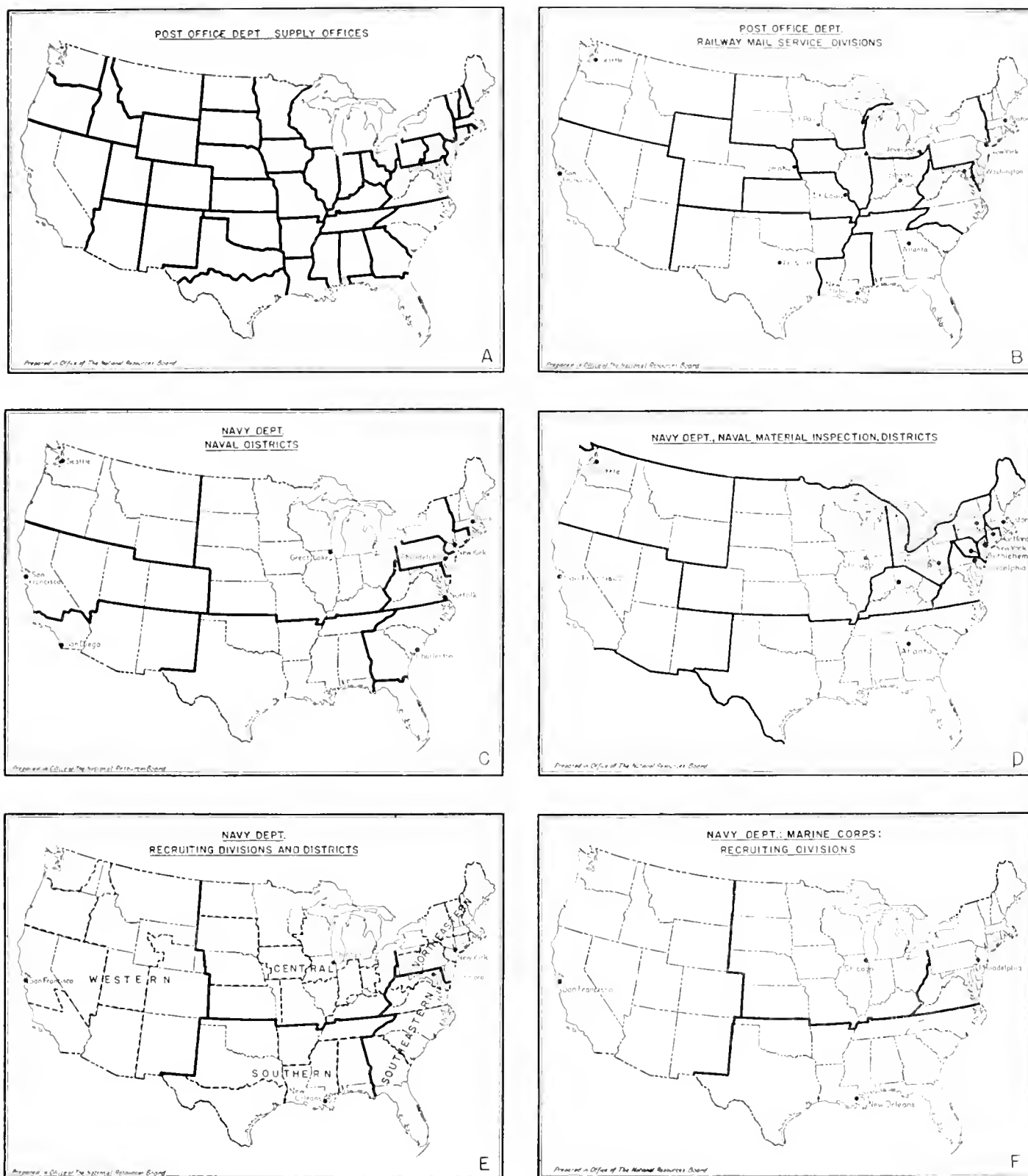


FIGURE 35.

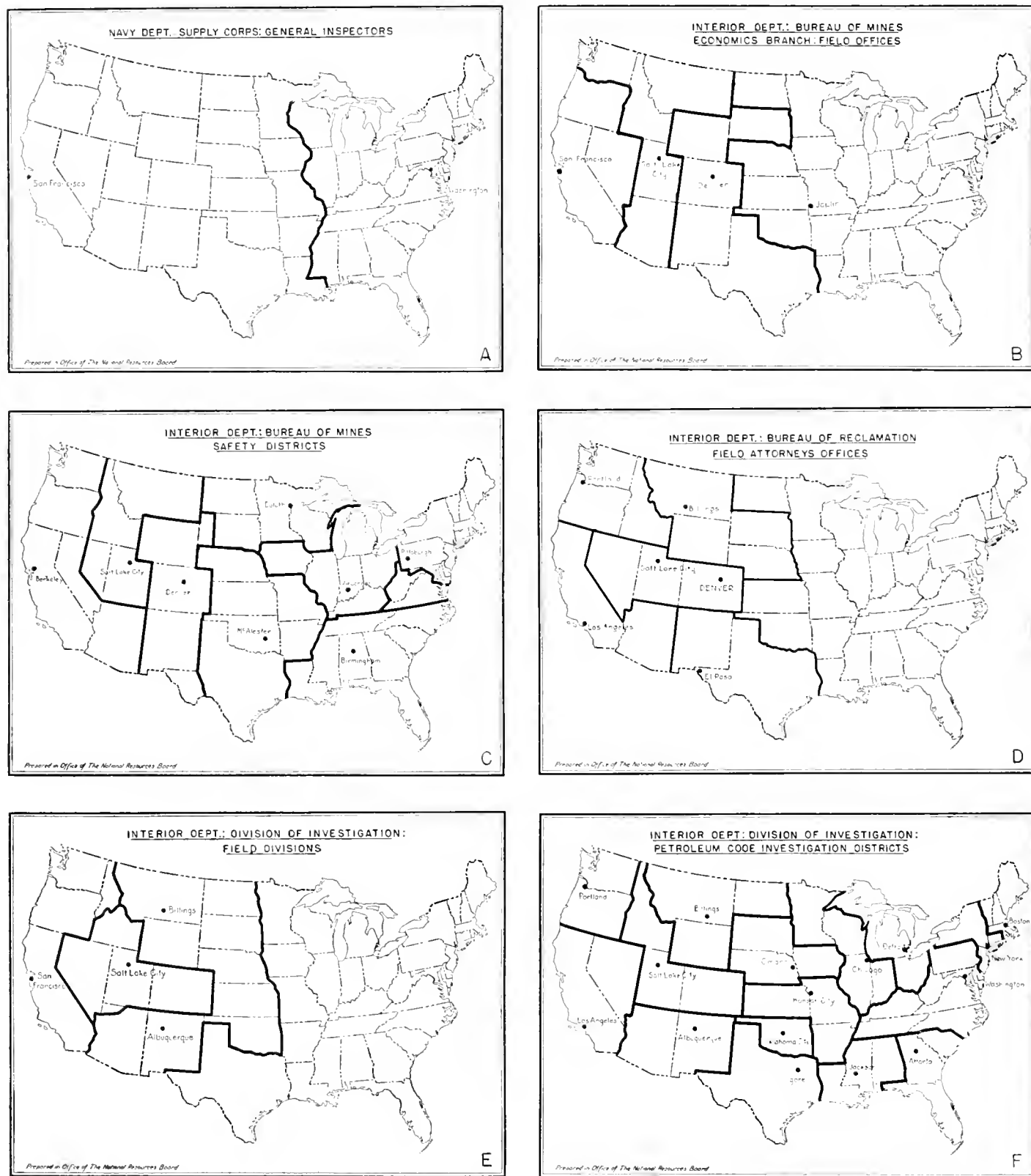


FIGURE 36.

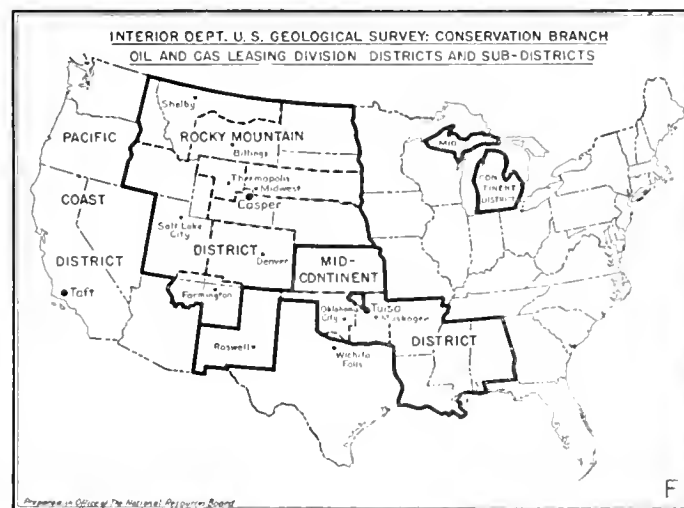
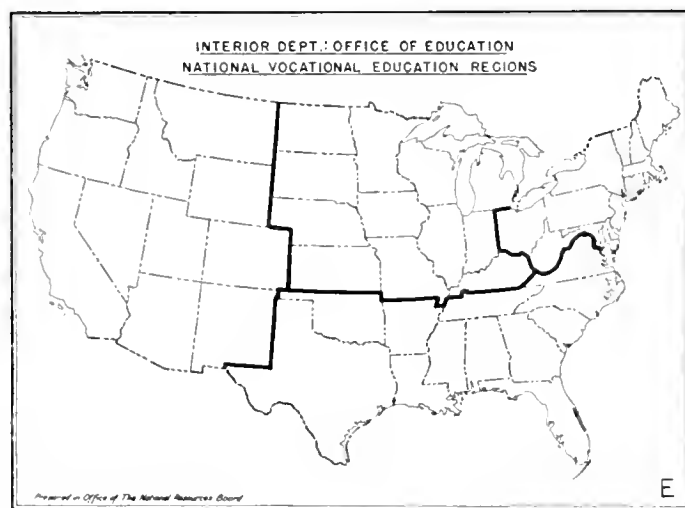
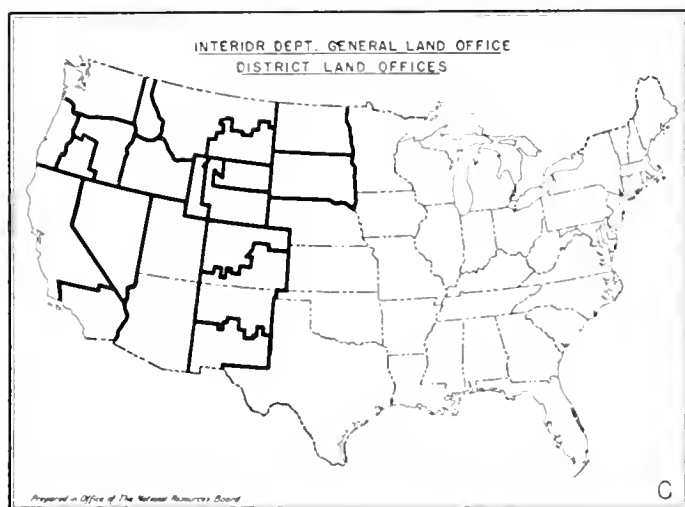
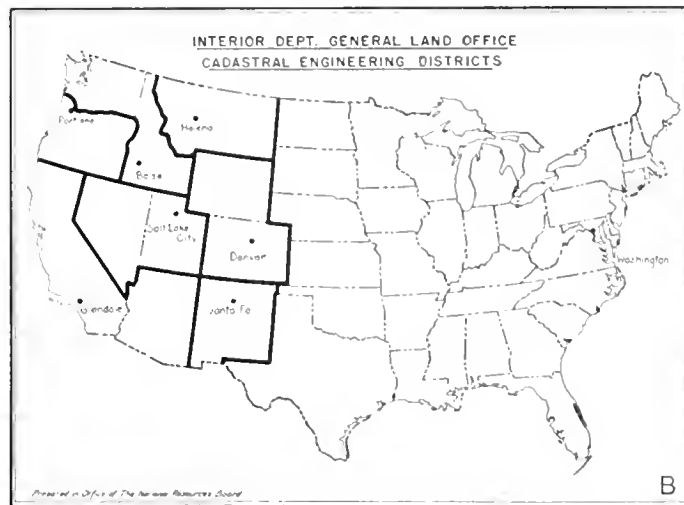


FIGURE 37.

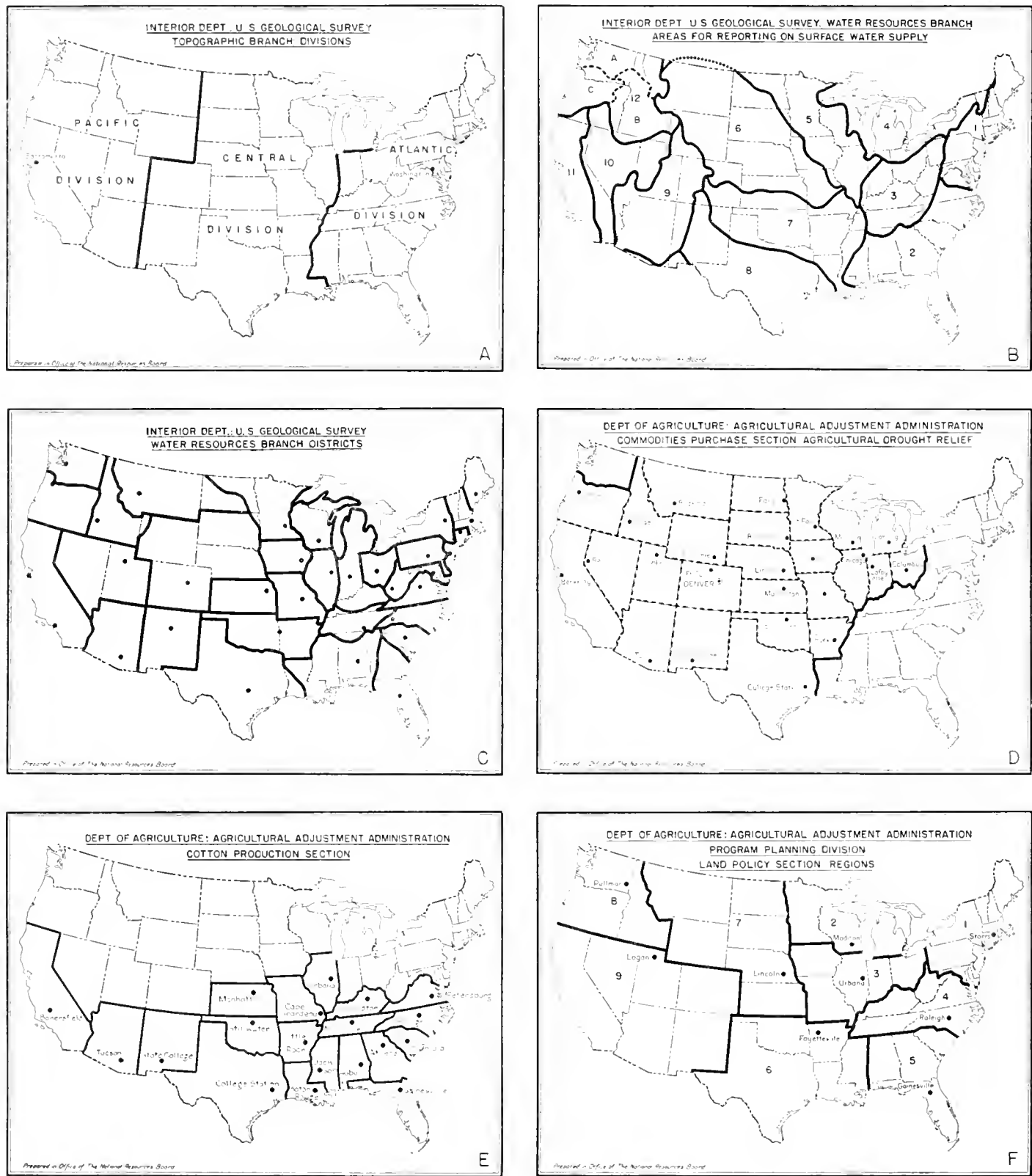


FIGURE 38.

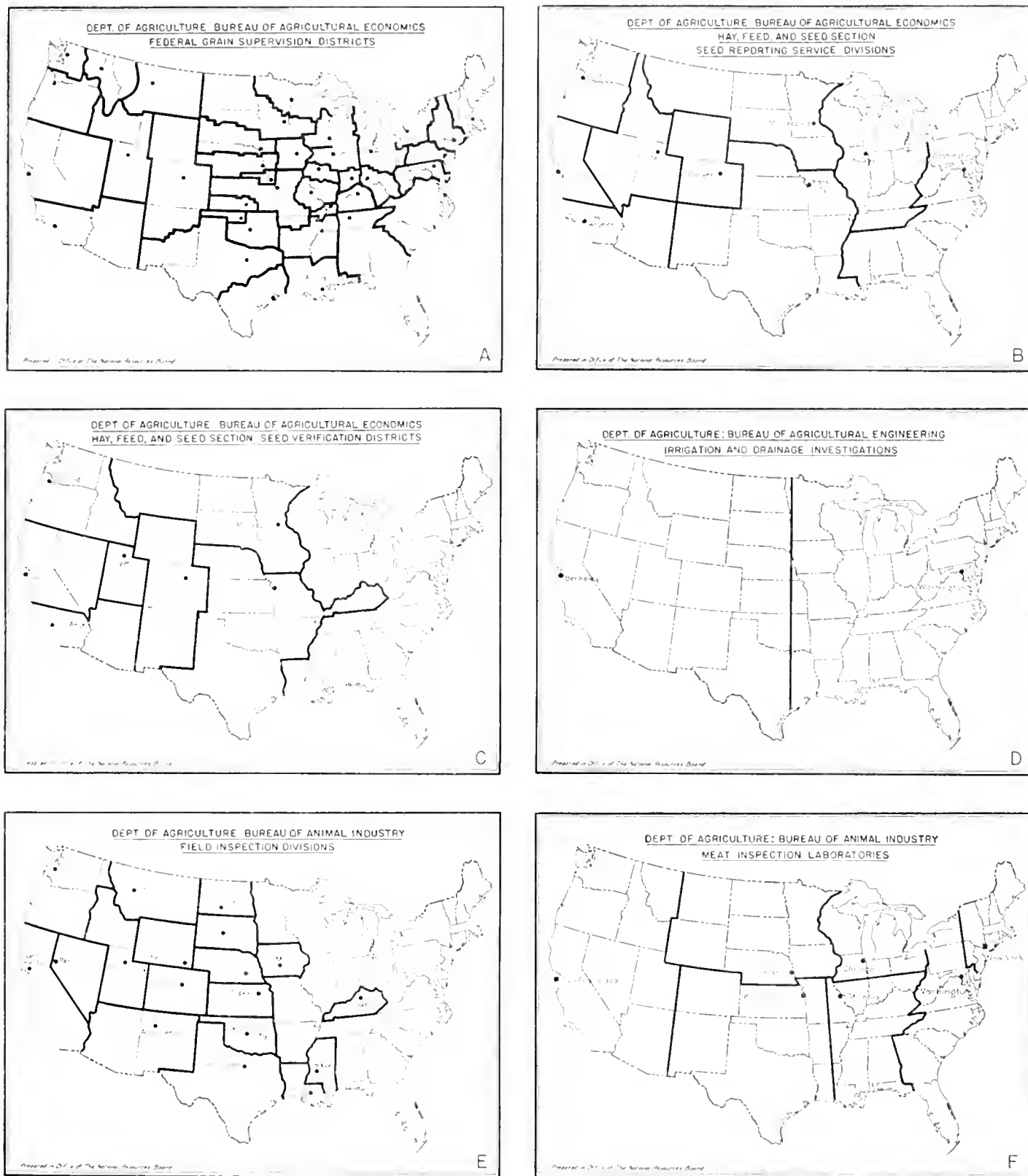


FIGURE 39.

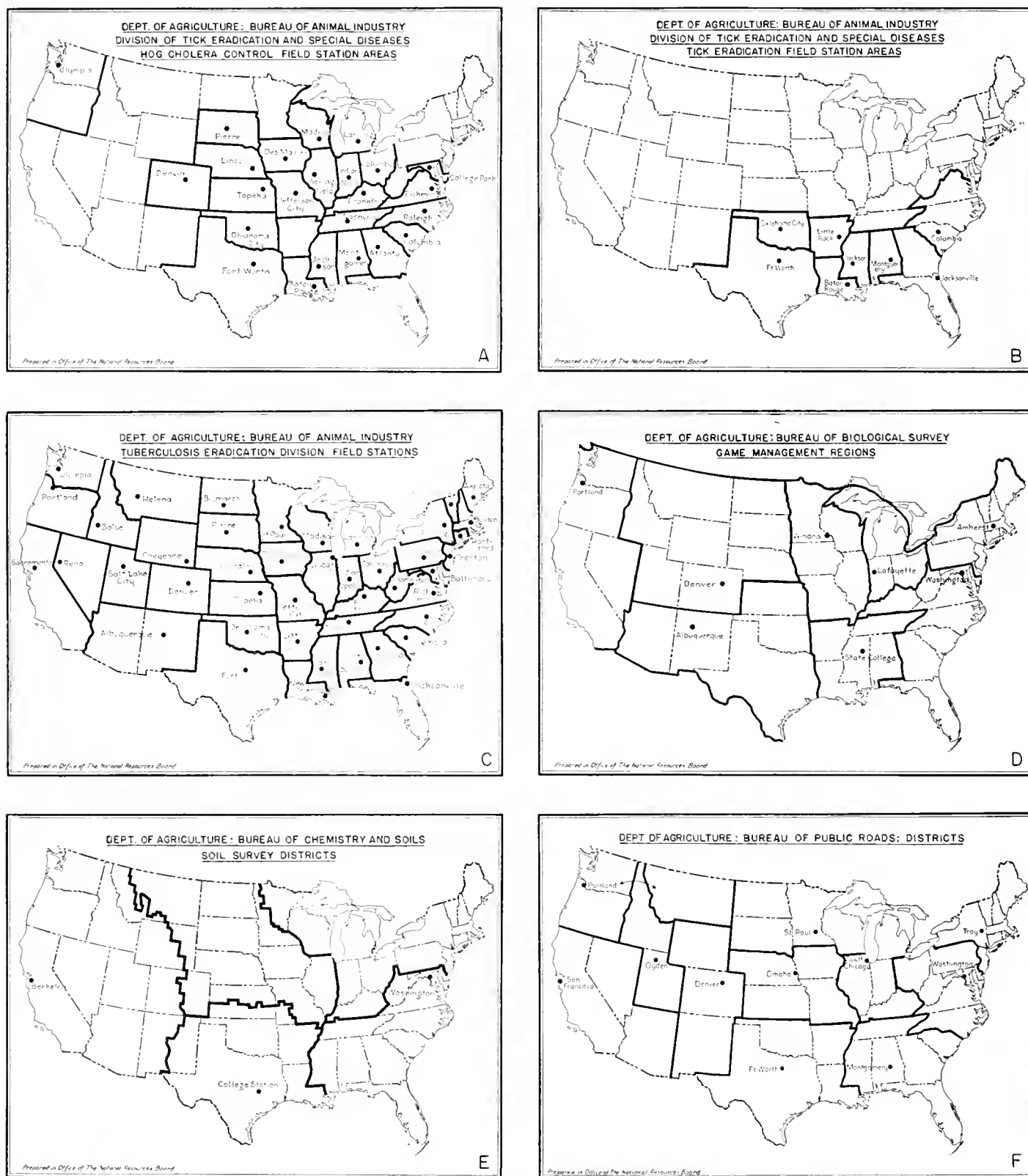


FIGURE 40.

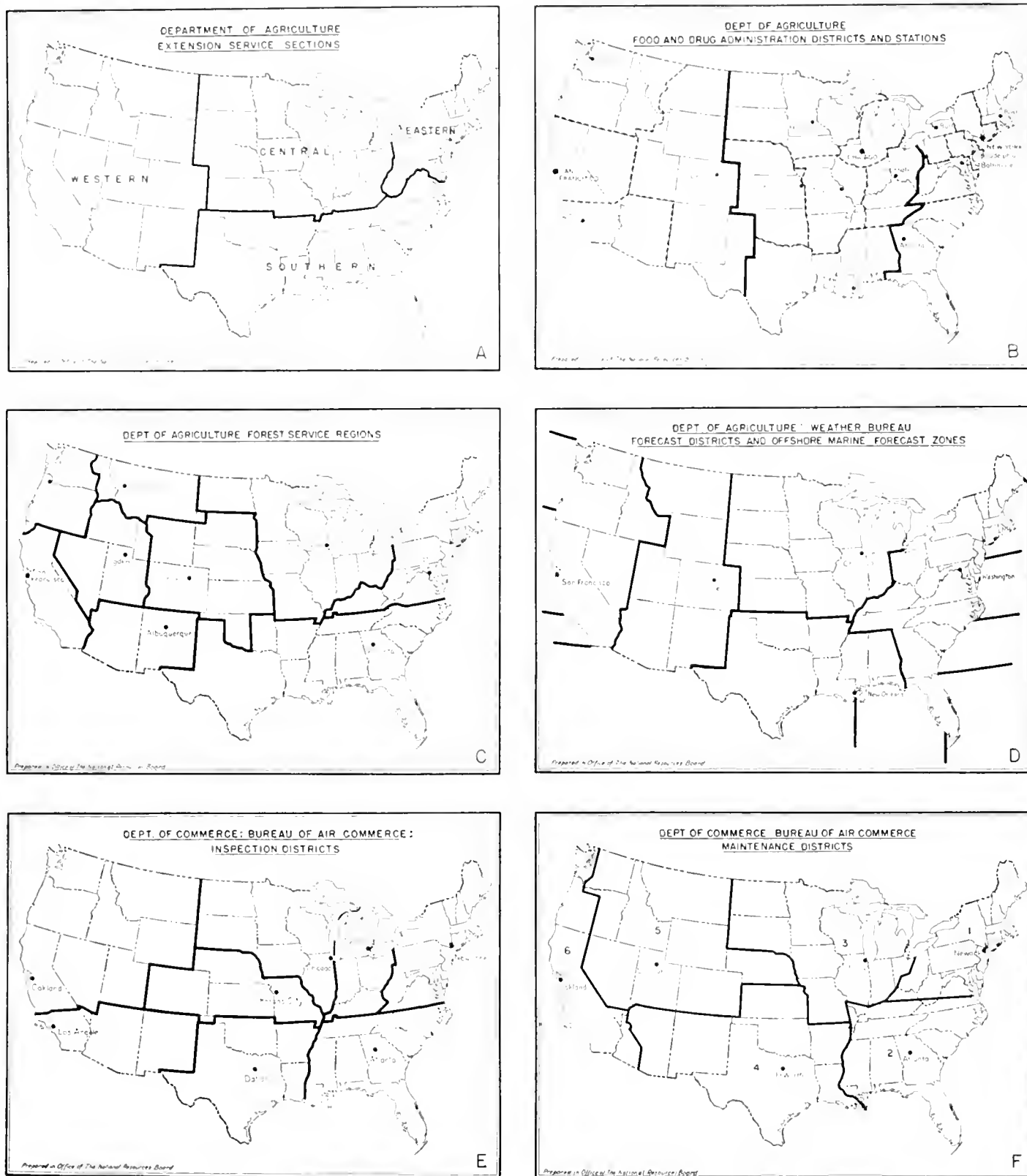


FIGURE 41.

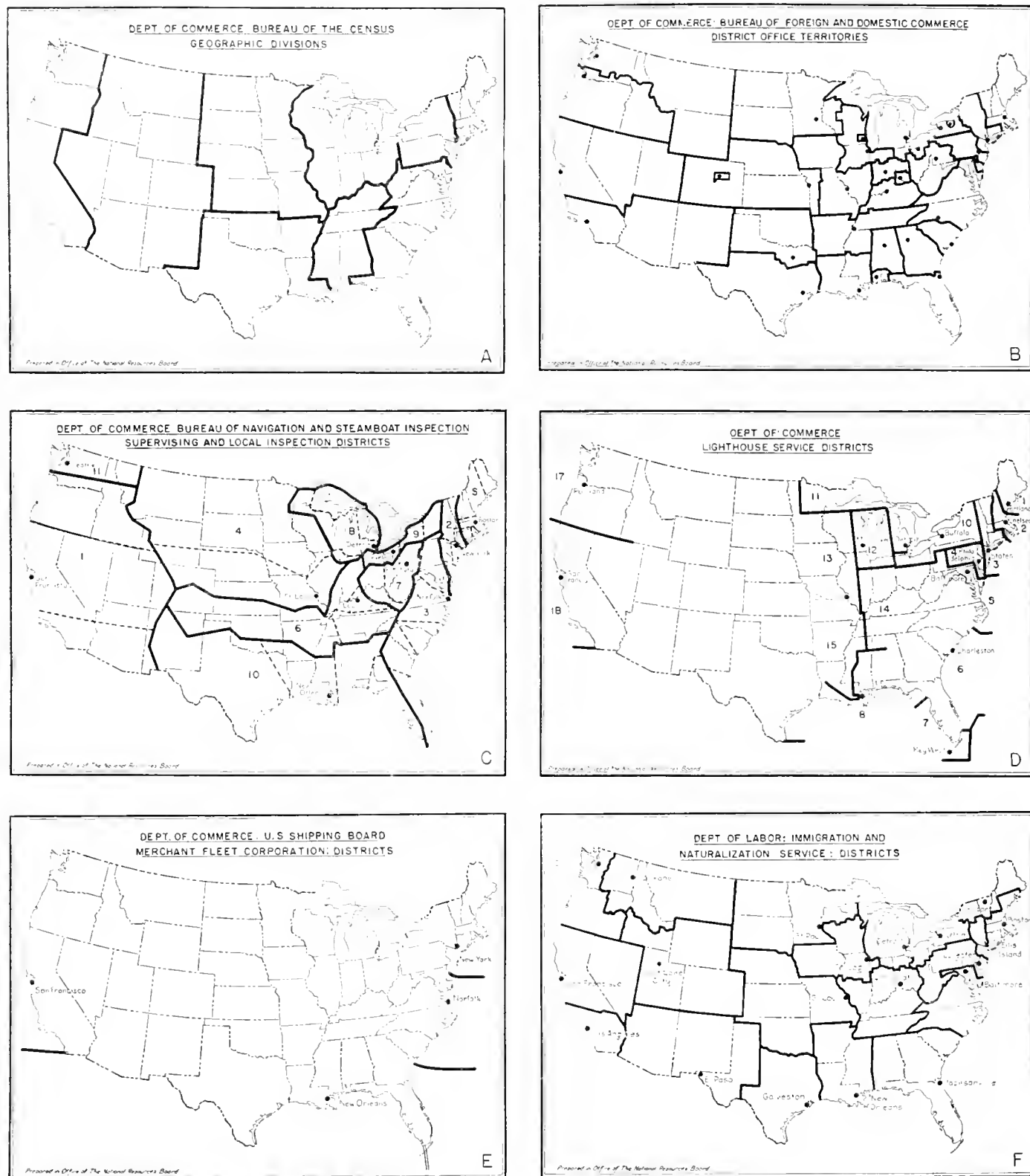


FIGURE 42.

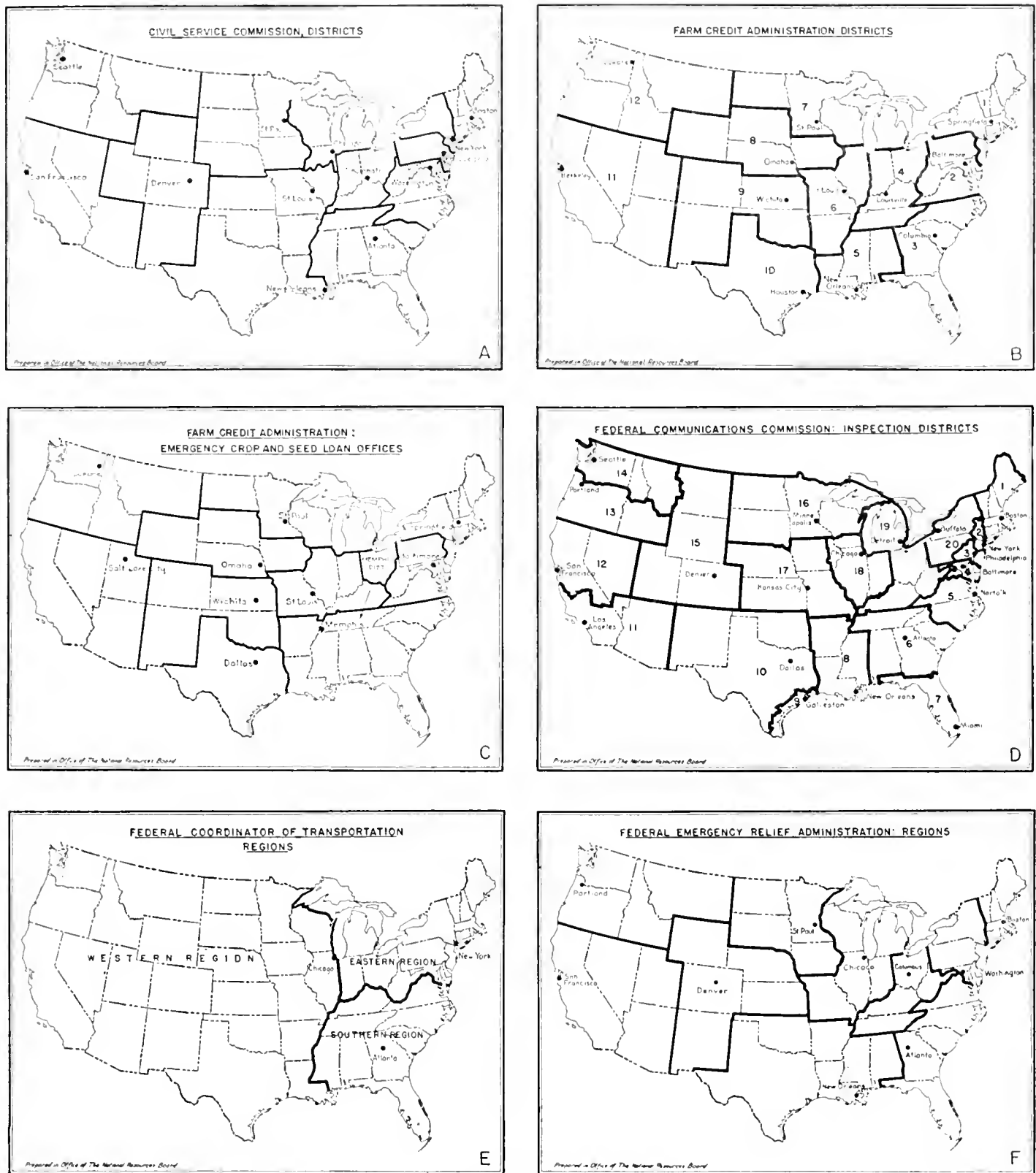


FIGURE 43.

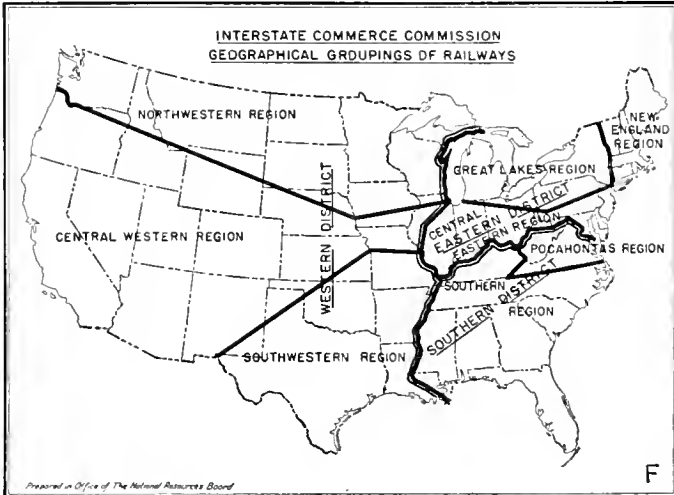
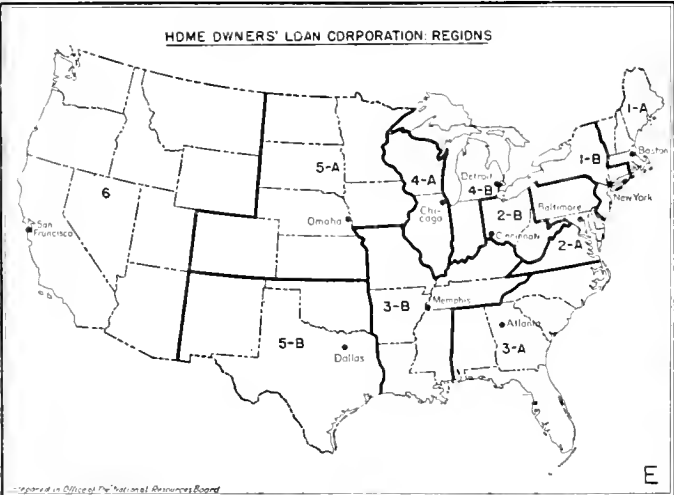
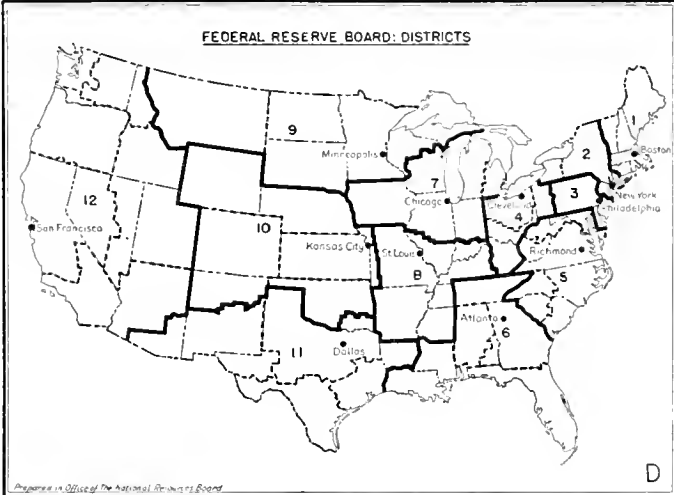
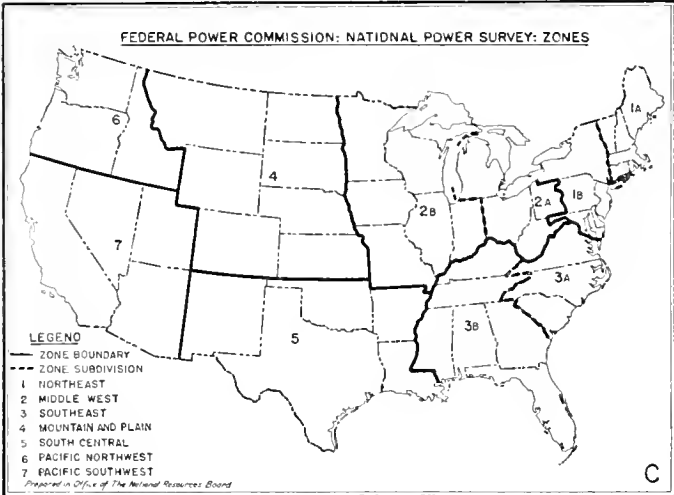
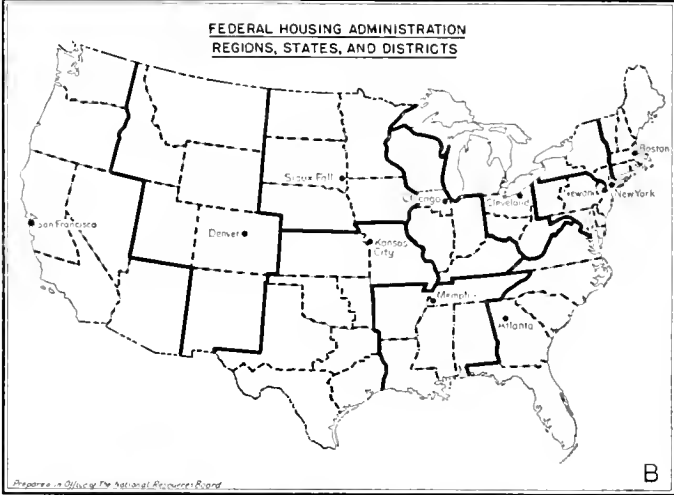
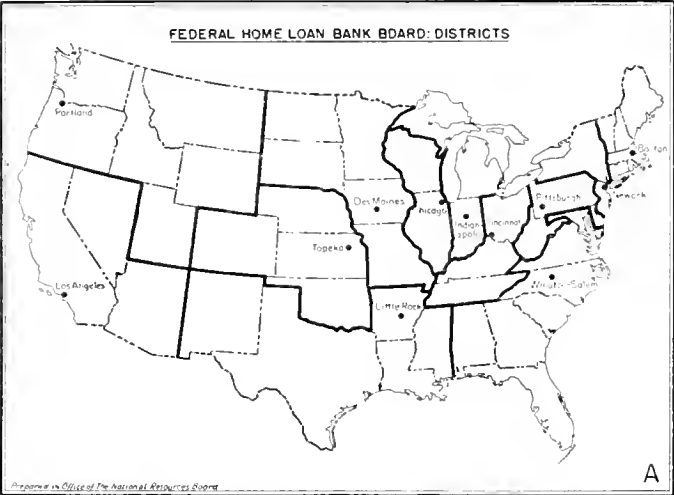


FIGURE 44.

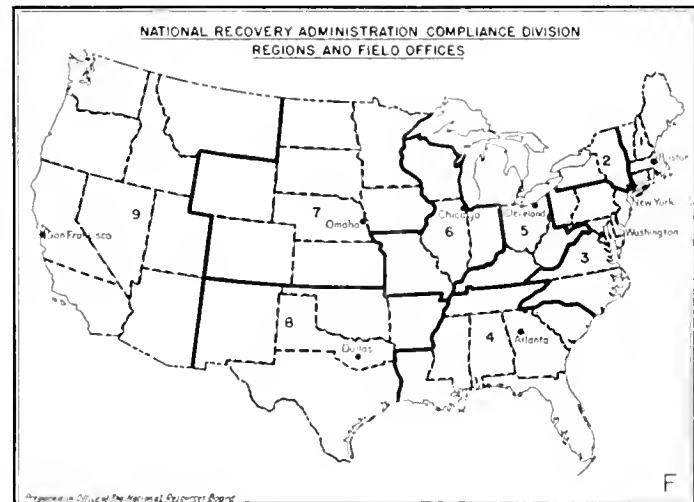
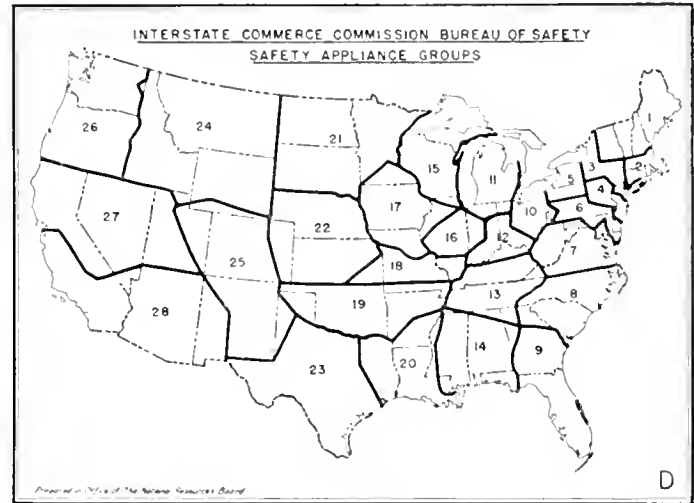
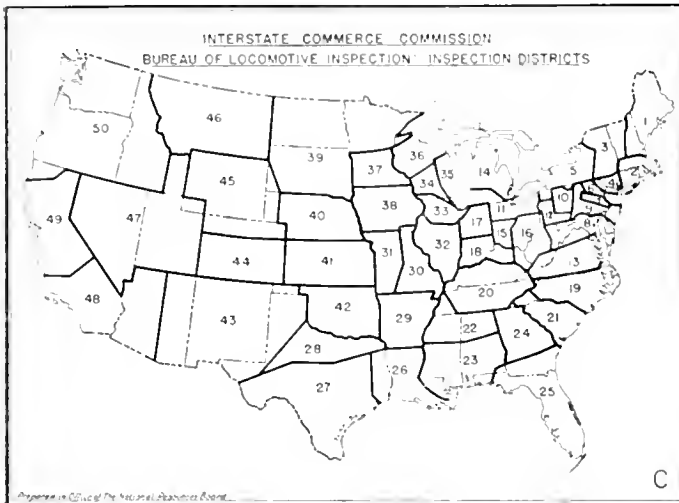
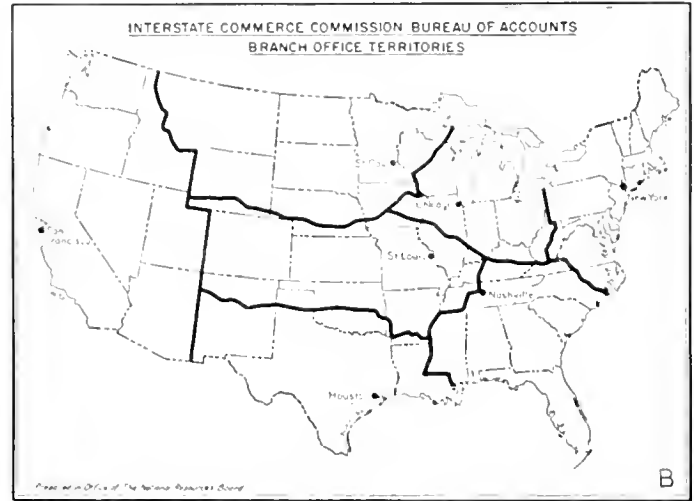
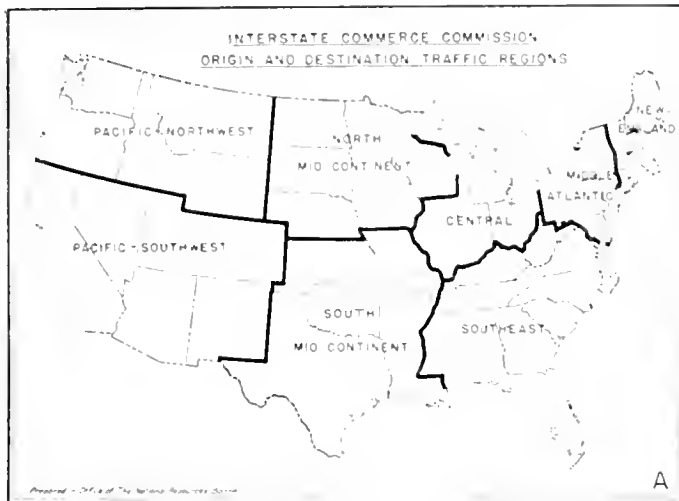


FIGURE 45.

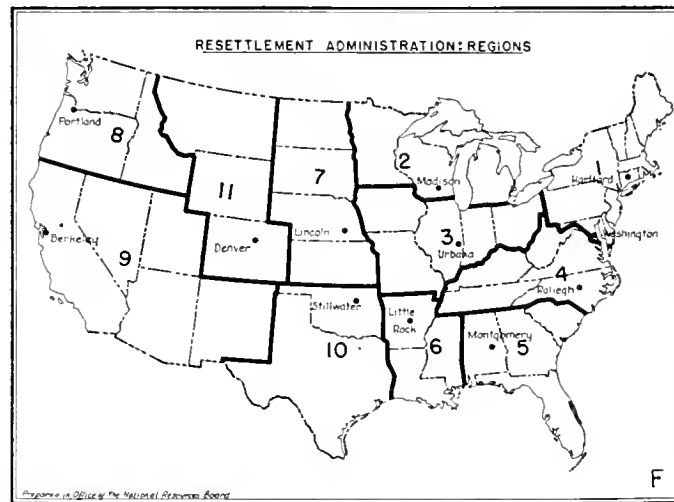
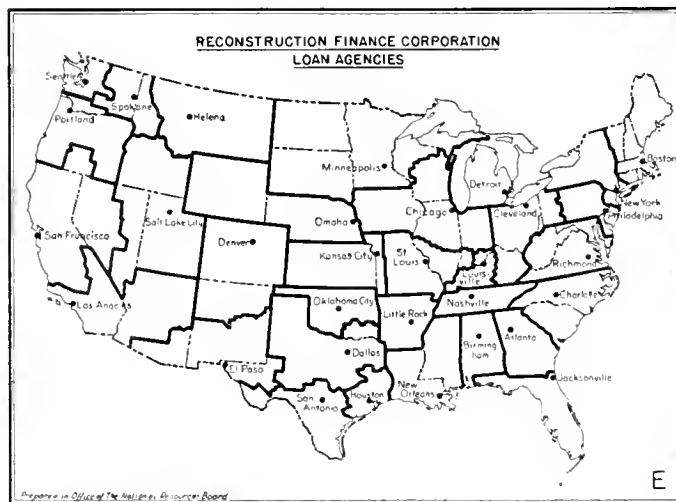
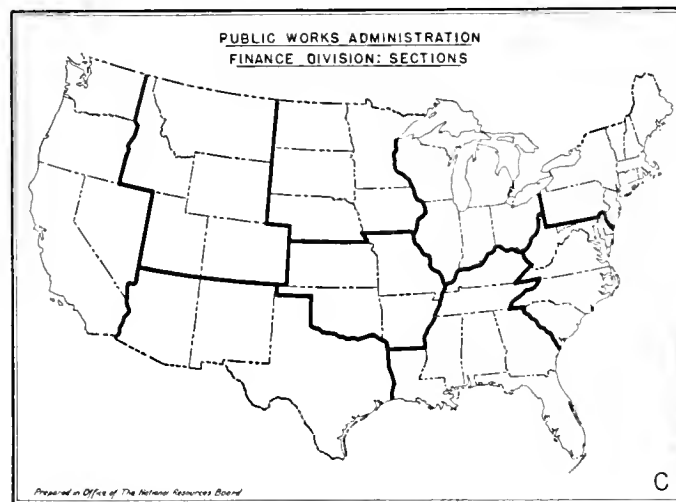
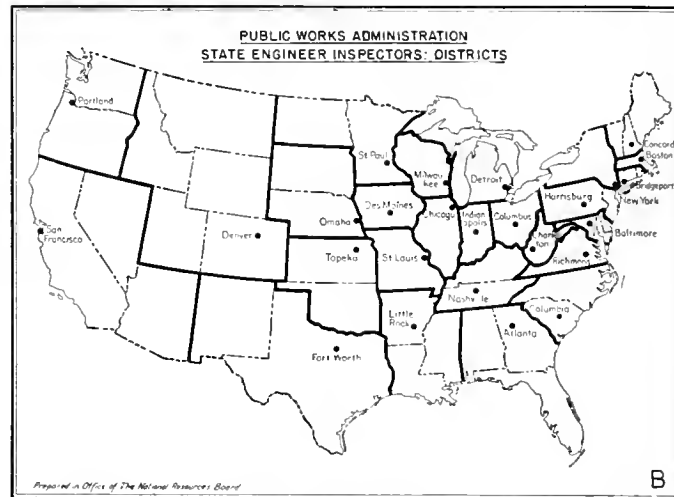


FIGURE 46.

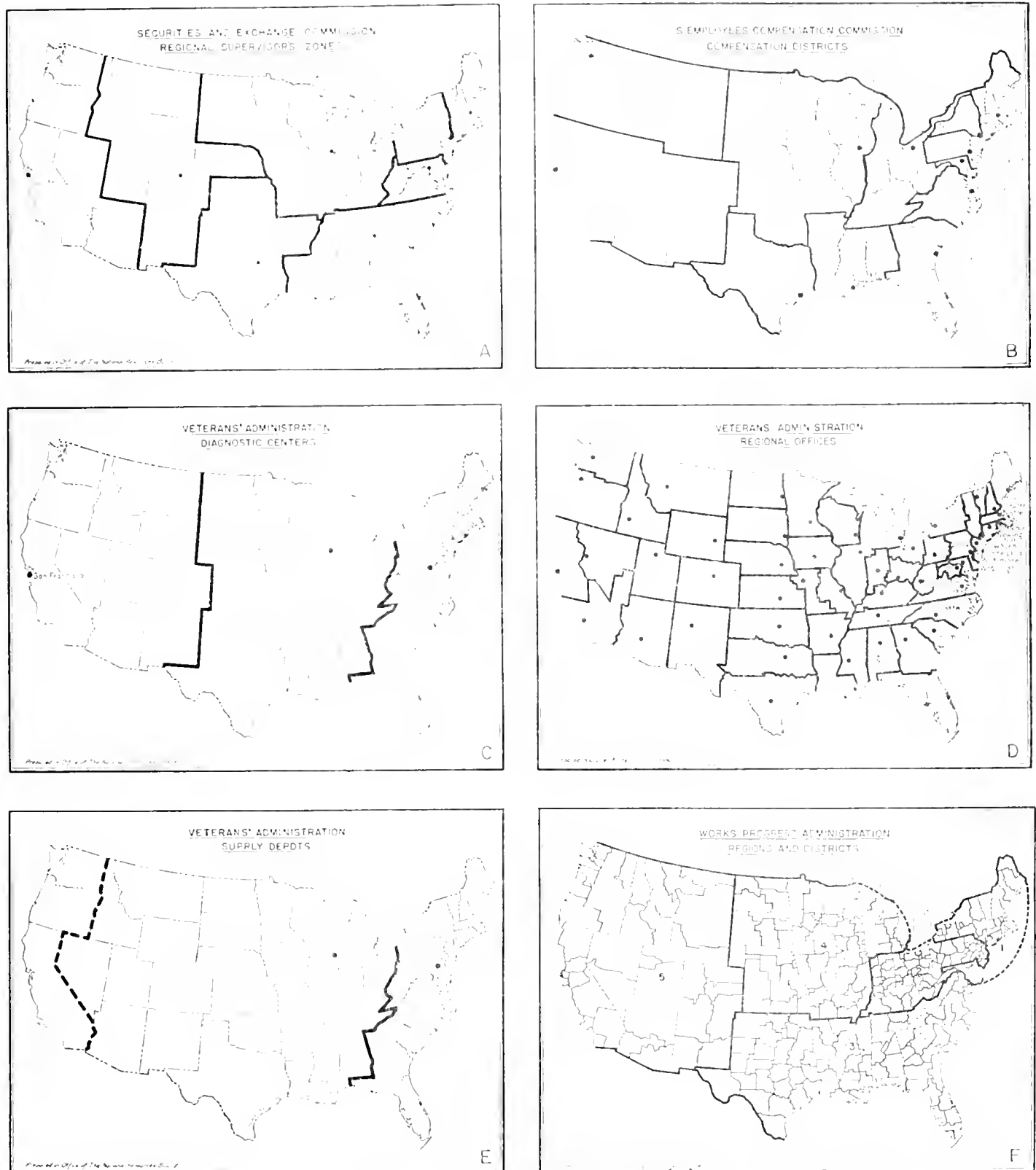


FIGURE 47.

